

ILLINOIS  
MALLEABLE  
IRON CO



CATALOGUE  
J. 1925

CHICAGO · ILLINOIS

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Established in 1880 by Henry E. Bullock

Incorporated 1884

# ILLINOIS MALLEABLE IRON Co.

MANUFACTURERS OF

MALLEABLE *and* CAST IRON PIPE FITTINGS

SCREWED AND FLANGED

IRON BODY GATE VALVES

BRASS VALVES

HOUSE HEATING BOILERS

TANK HEATERS, ETC.

CATALOGUE

J-1925

*General Offices:* 1801-1825 DIVERSEY PARKWAY

*Works:*

Diversey Parkway and C. & N. W. R. R., Ashland Ave. and Wellington St.

*Branch Stores:*

4545-4547 South State Street

1901 West Van Buren Street

2705-2707 Lincoln Avenue

CHICAGO, ILLINOIS, U. S. A.

*Canadian Plant:*

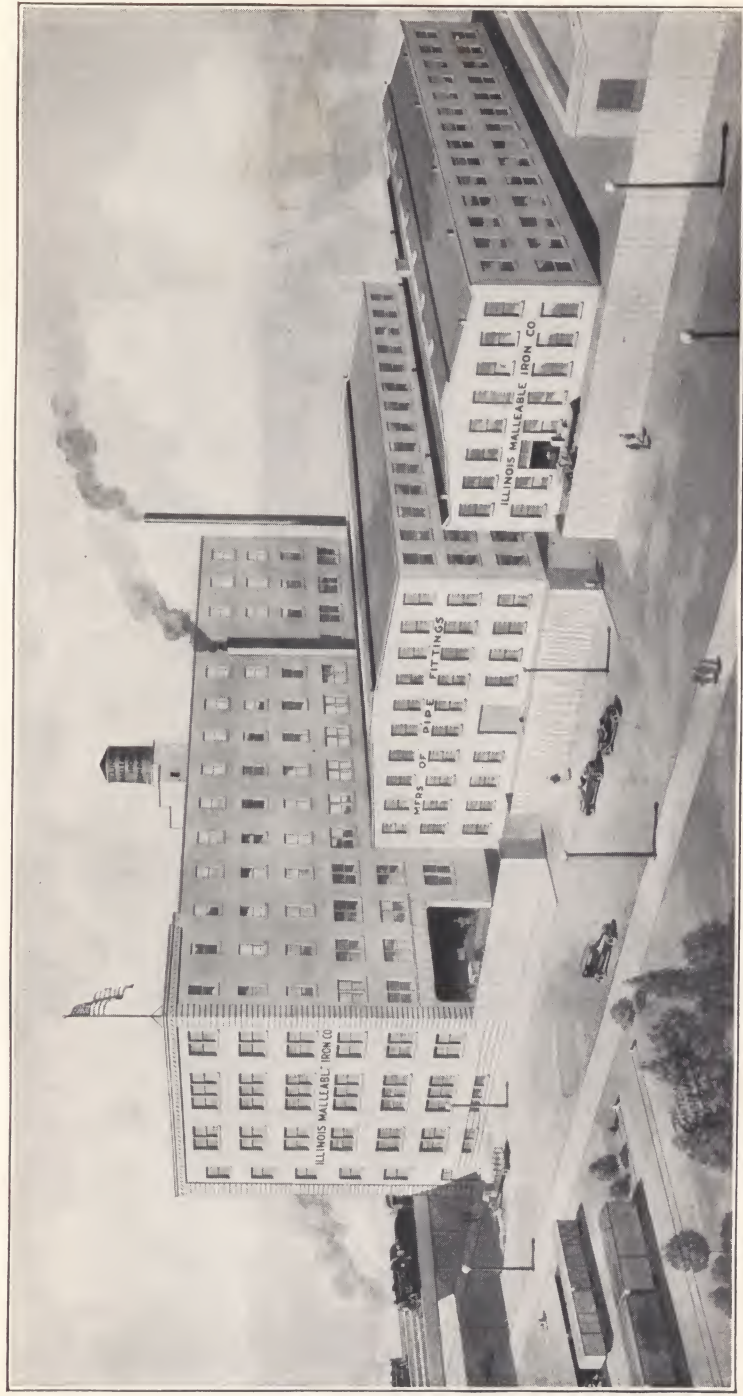
INTERNATIONAL MALLEABLE IRON CO., LIMITED

GUELPH, ONT., CANADA





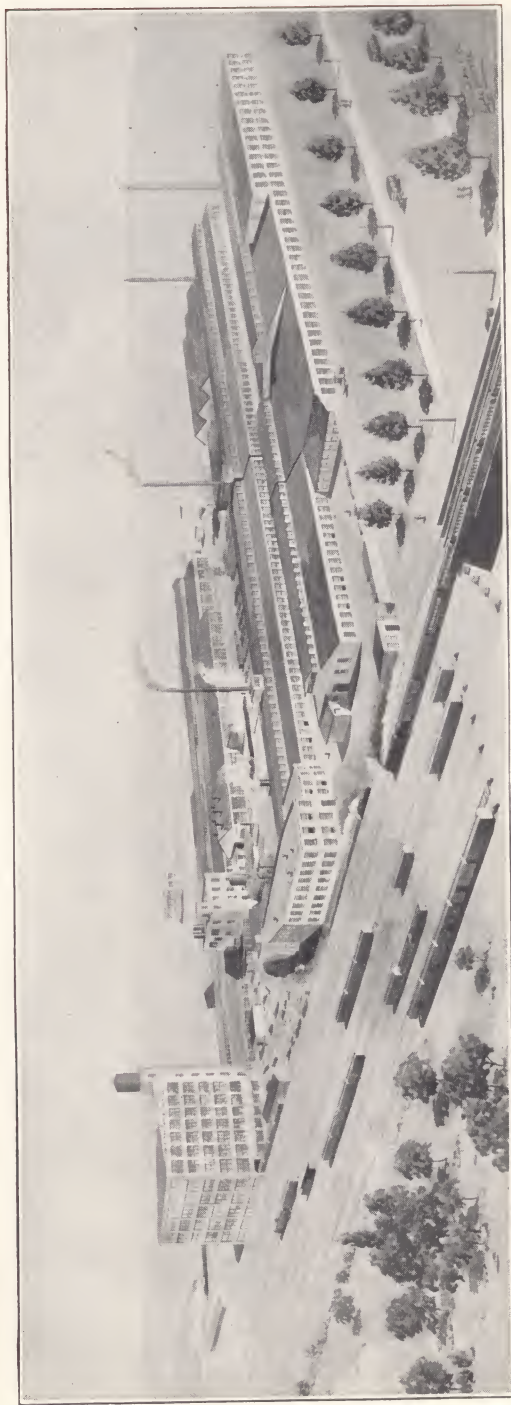
ILLINOIS MALLEABLE IRON COMPANY, CHICAGO, ILL.  
GENERAL OFFICES, 1801 DIVERSEY PARKWAY



PLANT 1

Diversey Parkway and C. & N. W. Tracks. Tapping and Machine Shop Division, Pipe Fitting Department. The center building, formerly of two stories, represents the original plant.

ILLINOIS MALLEABLE IRON COMPANY, CHICAGO, ILL.  
GENERAL OFFICES, 1801 DIVERSEY PARKWAY



PLANT 2

Diversey Parkway, Paulina Street, C. & N. W. R. R.  
Grey Iron Foundry, Cast Iron Boiler Department, Malleable Iron Foundries.

ILLINOIS MALLEABLE IRON COMPANY, CHICAGO, ILL.  
GENERAL OFFICES, 1801 DIVERSEY PARKWAY



PLANT 3

Paulina and Wellington Streets, Ashland Avenue and Wolfram Street.  
Malleable Foundries, Power Plant and Galvanizing Shop.



INTERNATIONAL MALLEABLE IRON CO., LIMITED



GUELPH, ONTARIO

Trade Mark Registered



U. S. Patent Office 1912

# CASTINGS

We solicit orders for  
Certified Malleable Iron Castings  
Gray Iron Castings  
Brass or Bronze Castings  
From Customers' Patterns



*In connection with our foundry work we  
are prepared to supply Galvanized  
Malleable or Gray Iron  
Castings*



## CONDITIONS OF SALE

1. All prices are subject to change without notice; quotations are made for immediate acceptance.

2. All contracts subject to strikes, accidents or causes beyond our control.

3. Our liability for shortages, breakages or damages of any nature ceases upon delivery to, and clear receipt obtained from, the transportation company.

4. Claims for corrections or deductions for erroneous charges must be made within ten days after receipt of goods. In making claims for shortage of goods, or overcharge in freight, the *original* paid freight bill must accompany each claim, which, in case of shortage, should bear notation thereon to that effect. In making claims always refer to date and number of invoice.

5. We exercise reasonable care to furnish nothing but perfect goods, but it must be understood that we assume no liability for damages of any character.

6. Should any article be found defective in either material or workmanship, we will, upon return to us of such defective article, either give credit at price charged, or exchange same for a perfect article of like description, but no further allowance will be made, however, unless arrangements have been made in advance of return.

7. Orders for goods not regularly carried in stock, or to be made to customers' specifications, are not subject to cancellation at any time.

**ILLINOIS MALLEABLE IRON COMPANY.**

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## STANDARD MALLEABLE IRON FITTINGS

### FOR STEAM WORKING PRESSURES UP TO 150 POUNDS



Fig. 11403A

#### PATTERNS

We make our fittings in both flat band and plain patterns. Our flat band fittings are made from new patterns, scientifically designed by recognized experts, constructed in conformity with the latest ideas and are uniform as to proportions. Our elbows, tees and crosses of the same size, having the same center to face dimensions, will commend the favorable notice of practical men.

#### THREADING AND REAMING

Our fittings are reamed or counterbored and are threaded strictly in accordance with Briggs standard gauge,  $\frac{3}{4}$ -inch taper to the foot, and conform in this respect with the taper of the thread on the pipe. All fittings are tapped on modern machinery, securing absolutely true angles and perfect alignment.

#### WORKING PRESSURE

Our malleable steam fittings are suitable for steam working pressures up to 150 pounds, although, if proper care is exercised in installing them, they will stand higher pressures, but as is well known, fittings of all kinds are subject to strains due to expansion or contraction, or the making up of joints, so we do not recommend our steam fittings for higher than the working pressure named.

#### STOCK SIZES

We show on pages 3, 4, 5 and 6 a large line of straight and reducing sizes and believe these are sufficient to cover the requirements of the trade. To avoid making fittings to order we recommend the use of bushings, but when it is absolutely necessary to have special fittings, we will be glad to quote price on receipt of specifications. This price in all cases will be found comparatively high.

#### GALVANIZED FITTINGS

Such sizes of malleable fittings as we list on pages 3, 4, 5 and 6 and mark with (\*) are carried in stock galvanized; other sizes will be made to order only at a special price, according to quantity wanted.

#### SPECIAL FITTINGS

We are prepared to make special fittings at any time and will quote prices on receipt of blue prints or samples, together with full information as to quantity wanted, etc.

## MALLEABLE IRON FITTINGS

### STANDARD CLASSIFICATION AND PRICE LIST

REVISED JUNE 1, 1917

Class.....	A $\frac{1}{8}$	B $\frac{1}{4}$ to 1, Inclusive All Sizes	C $1\frac{1}{4}$ and Larger
Caps.....			
Chandelier Hooks.....		All Sizes	
“ Loops.....		“	
Couplings, R. H.....		$\frac{1}{4}, \frac{3}{8}, \frac{1}{2}$ and $\frac{3}{4}$	1 and Larger
“ R. and L.....		$\frac{1}{4}, \frac{3}{8}, \frac{1}{2}$ “ $\frac{3}{4}$	1 “
“ Reducing.....	$\left\{ \begin{array}{l} 1\frac{1}{4} \times 1\frac{1}{8} \\ 3\frac{3}{8} \times 1\frac{1}{8} \\ 1\frac{1}{2} \times 1\frac{1}{8} \end{array} \right\}$	$\frac{3}{8} \times \frac{1}{4}$ to $1 \times \frac{3}{4}$	* $1\frac{1}{4}$ and Larger
Crosses.....		$\frac{1}{4}$ to 1, Inclusive	$1\frac{1}{4}$ and Larger
“ Reducing.....		1 and Smaller	* $1\frac{1}{4}$ “
Elbows.....	$\left\{ \begin{array}{l} 1\frac{1}{8} \times 1\frac{1}{8} \\ 1\frac{1}{4} \times 1\frac{1}{8} \\ 3\frac{3}{8} \times 1\frac{1}{8} \\ 1\frac{1}{2} \times 1\frac{1}{8} \end{array} \right\}$	$\left\{ \begin{array}{l} 1\frac{1}{4}, 3\frac{3}{8}, 1\frac{1}{2} \\ 3\frac{3}{8} \times 1\frac{1}{4} \\ 1\frac{1}{2} \times 1\frac{1}{4} \\ 1\frac{1}{2} \times 3\frac{3}{8} \end{array} \right\}$	* $\frac{3}{4}$ and Larger
Elbows, 45°.....		$\frac{1}{4}$ to 2, Inclusive	$2\frac{1}{2}$ “
“ 60°.....		$1\frac{1}{4}$ to 2	
“ Drop.....		All Sizes	
“ R. and L.....	$\frac{1}{4}, \frac{3}{8}$	$\frac{1}{2}, \frac{3}{4}, 1$	* $1\frac{1}{4}$ and Larger
“ Side Outlet.....		All Sizes	
“ Street.....	$\frac{1}{8}$	$\left\{ \begin{array}{l} 1\frac{1}{4}, 3\frac{3}{8}, 1\frac{1}{2}, \frac{3}{4} \\ 3\frac{3}{8} \times \frac{1}{2} \\ 1 \times \frac{1}{2}, 1 \times \frac{3}{4} \end{array} \right\}$	1 and Larger
“ “ 45°.....	$\frac{3}{8}$	$\frac{1}{2}$ and Larger	
Extension Pieces.....		All Sizes	
Locknuts.....	$\frac{1}{8}$	$\frac{1}{4}$ to $1\frac{1}{4}$ , Inclusive	$1\frac{1}{2}$ and Larger
Return Bends.....		1 and Smaller	$1\frac{1}{4}$ “
“ “ R and L.....	$\frac{3}{8}$ and $\frac{1}{2}$	$\frac{3}{4}$ and Larger	
Tees.....	$\left\{ \begin{array}{l} 1\frac{1}{8} \times 1\frac{1}{8} \\ 1\frac{1}{8} \times 1\frac{1}{4} \\ 1\frac{1}{4} \times 1\frac{1}{8} \\ 3\frac{3}{8} \times 1\frac{1}{8} \end{array} \right\}$	$\left\{ \begin{array}{l} 1\frac{1}{4}, 3\frac{3}{8}, 1\frac{1}{2} \\ 1\frac{1}{4} \times 1\frac{1}{4} \times 3\frac{3}{8} \\ 3\frac{3}{8} \times 1\frac{1}{4} \times 1\frac{1}{4} \\ 3\frac{3}{8} \times 3\frac{3}{8} \times 1\frac{1}{4} \\ 3\frac{3}{8} \times 1\frac{1}{4} \times 3\frac{3}{8} \\ 1\frac{1}{2} \text{ Reducing} \end{array} \right\}$	* $\frac{3}{4}$ and Larger
Tees, Drop.....		All Sizes	
“ Four-way.....		“	
“ Service.....		$\left\{ \begin{array}{l} 3\frac{3}{8}, 1\frac{1}{2}, \frac{3}{4} \\ 3\frac{3}{4} \times 1\frac{1}{2} \times 3\frac{3}{4} \\ 3\frac{3}{4} \times 1, 1 \times 3\frac{3}{4} \times 1 \\ 1 \times 1 \times 3\frac{3}{4} \end{array} \right\}$	1 and Larger
Wall Plates.....		All Sizes	
Waste Nuts.....		“	
“ Y” Bends.....	$\frac{3}{8}$	$\frac{1}{2}$ and Larger	
“ “ 60°.....		All Sizes	
Price, Black..... per pound	.40	.28	.13
“ Galvanized.....	.50		.20

\*Fittings in Class C having one or more outlets smaller than  $\frac{3}{4}$  inch will be charged as Class B.

Orders for malleable fittings aggregating not more than 25 pounds, assorted in Classes B and C, will be charged as Class B.

$\frac{1}{8}$ -inch street ells, caps and locknuts are sold by piece.

The run of a tee gives the size for the purpose of classification and the outlet being larger does not change it.

Right and left fittings, not classified above, take one class higher than right. For small quantities of right and left fittings we will charge time.

NOTE.—We make many fittings not shown above. If you need special fittings, specifications are invited.



## STANDARD MALLEABLE IRON FITTINGS

REVISED CLASSIFICATION—JUNE 1, 1917

Banded for Steam



Fig. 11405A

Plain for Gas



Fig. 11405B

Some sizes of malleable iron fittings are made in two styles, banded for steam or water, and plain for gas. We will always ship banded pattern when made, unless otherwise ordered.

## ELBOWS

	Size	Class
*Banded & Plain	1 1/8	A
*Plain	1 1/4 x 1/8	A
*Banded & Plain	1 1/4	B
*Banded	3/8 x 1/8	A
*Banded	3/8 x 1/4	B
*Banded & Plain	3/8	B
*Banded	1/2 x 1/8	A
*Banded	1/2 x 1/4	B
*Banded & Plain	1/2 x 3/8	B
*Banded & Plain	1/2	B
*Banded	3/4 x 3/8	B
*Banded & Plain	3/4 x 1/2	B
*Banded & Plain	3/4	B
*Banded	1 x 3/8	B
*Banded	1 x 1/2	B
*Banded & Plain	1 x 3/4	C
*Banded & Plain	1	C
*Banded	1 1/4 x 1/2	B
*Banded	1 1/4 x 3/4	C
*Banded	1 1/4 x 1	C
*Banded & Plain	1 1/4	C
*Banded	1 1/2 x 3/4	C
*Banded	1 1/2 x 1/4	C
*Banded & Plain	1 1/2	C
*Banded	2 x 3/4	C
*Banded	2 x 1	C
*Banded	2 x 1 1/4	C
*Banded	2 x 1 1/2	C
*Banded & Plain	2	C
*Banded	2 1/4 x 1 1/2	C
*Banded	2 1/2 x 2	C
*Banded	2 1/2	C
*Banded	3 x 2	C
*Banded	3 x 2 1/2	C
*Banded	3	C
*Banded	3 1/2 x 3	C
*Banded	3 1/2	C

## ELBOWS

	Size	Class
*Banded	4 x 2 1/2	C
*Banded	4 x 3	C
*Banded	4 x 3 1/2	C
*Banded	4	C
*Banded	4 1/2	C
*Banded	5	C
*Banded	6	C

RIGHT AND LEFT  
ELBOWS

*Banded	1/4 x 1/4	A
*Banded	3/8 x 3/8	A
*Banded	1/2 x 1/2	B
*Banded	3/4 x 3/4	B
*Banded	1 x 1	B
*Banded	1 1/4 x 1 1/4	C
*Banded	1 1/2 x 1 1/2	C
*Banded	2 x 2	C

## STREET ELBOWS

*Banded	1/8	A
*Banded	1/4	B
*Banded	3/8	B
*Banded	1/2	B
*Banded	3/4 x 1/2	B
*Banded	3/4	B
*Banded	1 x 3/4	B
*Banded	1	B
*Banded	1 1/4 x 3/4	C
*Banded	1 1/4 x 1	C
*Banded	1 1/2	C
*Banded	1 1/2 x 1 1/4	C
*Banded	1 1/2	C
*Banded	2 x 1 1/2	C
*Banded	2	C
*Banded	2 1/2	C
*Banded	3	C
*Banded	4	C

## 45° STREET ELBOWS

	Size	Class
*Banded	3/8	A
*Banded	1/2	B
*Banded	3/4	B
*Banded	1	B
*Banded	1 1/4	B
*Banded	1 1/2	B
*Banded	2	B

## ELBOWS

## WITH SIDE OUTLET

*Plain	3/8 x 3/8	1/4 B
*Plain	3/8 x 3/8	3/8 B
*Plain	1/2 x 1/2	3/8 B
*Plain	1/2 x 1/2	1/2 B
*Plain	3/4 x 3/4	3/8 B
*Plain	3/4 x 3/4	1/2 B
*Plain	3/4 x 3/4	3/4 B
*Plain	1 x 1	x 1/2 B
*Plain	1 x 1	x 1 B
*Plain	1 1/4 x 1 1/4	1 1/4 B
*Plain	1 1/2 x 1 1/2	1 1/2 B
*Plain	2 x 2	x 2 B

## 45° ELBOWS

*Banded	1/8	A
*Banded	1/4	B
*Banded	3/8	B
*Banded & Plain	1/2	B
*Banded & Plain	3/4	B
*Banded & Plain	1	B
*Banded & Plain	1 1/4	B
*Banded & Plain	1 1/2	B
*Banded & Plain	2	C
*Banded	2 1/2	C
*Banded	3	C
*Banded	3 1/2	C
*Banded	4	C
*Banded	4 1/2	C
*Banded	5	C
*Banded	6	C

\*Also carried in stock galvanized.



# STANDARD MALLEABLE IRON FITTINGS

## REVISED CLASSIFICATION—JUNE 1, 1917

## TEES

The run is first named, then the outlet, thus:  $\frac{1}{2}$  T  $\frac{1}{2}=\frac{1}{2} \times \frac{3}{4}$ ;  $\frac{1}{2}$  T  $\frac{3}{8}=\frac{1}{2} \times \frac{3}{8} \times \frac{3}{4}$ .

	Size	Class		Size	Class		Size	Class
*Banded & Plain	$\frac{1}{8} \times \frac{1}{8} \times \frac{1}{8}$	A	*Banded	$1\frac{1}{2} \times 1\frac{1}{2} \times 1$	B	*Banded & Plain	2 x 2 x $\frac{3}{4}$	C
*Plain	$\frac{1}{8} \times \frac{1}{8} \times \frac{1}{4}$	A	*Banded	$1\frac{1}{4} \times 1\frac{1}{4} \times \frac{1}{4}$	B	*Banded & Plain	2 x 2 x 1	C
*Plain	$\frac{1}{4} \times \frac{1}{4} \times \frac{1}{8}$	A	*Banded	$1\frac{1}{4} \times \frac{3}{4} \times \frac{3}{4}$	C	*Banded & Plain	2 x 2 x $1\frac{1}{4}$	C
*Banded & Plain	$\frac{1}{4} \times \frac{1}{4} \times \frac{1}{4}$	B	*Banded	$1\frac{1}{4} \times \frac{3}{4} \times 1$	C	*Banded & Plain	2 x 2 x $1\frac{1}{2}$	C
*Banded & Plain	$\frac{1}{4} \times \frac{1}{4} \times \frac{3}{8}$	B	*Banded	$1\frac{1}{4} \times \frac{3}{4} \times 1\frac{1}{4}$	C	*Banded & Plain	2 x 2 x 2	C
*Plain	$\frac{3}{8} \times \frac{1}{4} \times \frac{1}{4}$	B	*Plain	$1\frac{1}{4} \times 1 \times \frac{3}{8}$	B	*Banded	2 x 2 x $2\frac{1}{2}$	C
*Plain	$\frac{3}{8} \times \frac{1}{4} \times \frac{3}{8}$	B	*Banded	$1\frac{1}{4} \times 1 \times \frac{1}{2}$	B	*Banded	$2\frac{1}{2} \times 2 \times 1\frac{1}{2}$	C
*Plain & Banded	$\frac{3}{8} \times \frac{3}{8} \times \frac{1}{8}$	A	*Banded	$1\frac{1}{4} \times 1 \times \frac{3}{4}$	C	*Banded	$2\frac{1}{2} \times 2 \times 2$	C
*Banded & Plain	$\frac{3}{8} \times \frac{3}{8} \times \frac{1}{4}$	B	*Banded & Plain	$1\frac{1}{4} \times 1 \times 1$	C	*Banded	$2\frac{1}{2} \times 1\frac{1}{2} \times 2$	C
*Banded & Plain	$\frac{3}{8} \times \frac{3}{8} \times \frac{3}{8}$	B	*Banded & Plain	$1\frac{1}{4} \times 1 \times 1\frac{1}{4}$	C	*Banded	$2\frac{1}{2} \times 1\frac{1}{2} \times 2\frac{1}{2}$	C
*Banded & Plain	$\frac{3}{8} \times \frac{3}{8} \times \frac{1}{2}$	B	*Banded & Plain	$1\frac{1}{4} \times 1\frac{1}{4} \times \frac{3}{8}$	B	*Banded	$2\frac{1}{2} \times 2 \times 2\frac{1}{2}$	C
*Banded & Plain	$\frac{1}{2} \times \frac{1}{4} \times \frac{1}{2}$	B	*Banded & Plain	$1\frac{1}{4} \times 1\frac{1}{4} \times \frac{1}{2}$	B	*Banded	$2\frac{1}{2} \times 2\frac{1}{2} \times \frac{3}{4}$	C
*Plain	$\frac{1}{2} \times \frac{3}{8} \times \frac{1}{4}$	B	*Banded & Plain	$1\frac{1}{4} \times 1\frac{1}{4} \times \frac{3}{4}$	C	*Banded	$2\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{4}$	C
*Banded & Plain	$\frac{1}{2} \times \frac{3}{8} \times \frac{3}{8}$	B	*Banded & Plain	$1\frac{1}{4} \times 1\frac{1}{4} \times 1$	C	*Banded	$2\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{2}$	C
*Banded & Plain	$\frac{1}{2} \times \frac{3}{8} \times \frac{1}{2}$	B	*Banded	$1\frac{1}{4} \times 1\frac{1}{4} \times 1\frac{1}{4}$	C	*Banded	$2\frac{1}{2} \times 2\frac{1}{2} \times 2$	C
*Plain	$\frac{1}{2} \times \frac{1}{2} \times \frac{1}{4}$	B	*Banded	1 x 1 x $1\frac{1}{2}$	C	*Banded	$2\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{2}$	C
*Banded & Plain	$\frac{1}{2} \times \frac{1}{2} \times \frac{3}{8}$	B	*Banded	$1\frac{1}{4} \times 1 \times 1\frac{1}{2}$	C	*Banded	$2\frac{1}{2} \times 2\frac{1}{2} \times 3$	C
*Banded & Plain	$\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$	B	*Banded	$1\frac{1}{4} \times 1\frac{1}{4} \times 1\frac{1}{2}$	C	*Banded	2 x 2 x 3	C
*Banded	$\frac{3}{4} \times \frac{3}{8} \times \frac{3}{4}$	B	*Banded	$1\frac{1}{2} \times \frac{3}{8} \times 1\frac{1}{2}$	B	*Banded	3 x 2 x 2	C
*Plain	$\frac{1}{2} \times \frac{3}{8} \times \frac{3}{4}$	B	*Banded	$1\frac{1}{2} \times \frac{1}{2} \times 1\frac{1}{2}$	B	*Banded	3 x 2 x $2\frac{1}{2}$	C
*Banded & Plain	$\frac{1}{2} \times \frac{1}{2} \times \frac{3}{4}$	B	*Banded	$1\frac{1}{2} \times \frac{3}{4} \times \frac{3}{4}$	C	*Banded	3 x 2 x 3	C
*Banded & Plain	$\frac{3}{4} \times \frac{1}{4} \times \frac{3}{4}$	B	*Banded	$1\frac{1}{2} \times \frac{3}{4} \times 1$	C	*Banded	3 x $2\frac{1}{2} \times 2$	C
*Plain & Banded	$\frac{3}{4} \times \frac{3}{8} \times \frac{3}{8}$	B	*Banded	$1\frac{1}{2} \times \frac{3}{4} \times 1\frac{1}{4}$	C	*Banded	3 x $2\frac{1}{2} \times 2\frac{1}{2}$	C
*Banded & Plain	$\frac{3}{4} \times \frac{3}{8} \times \frac{1}{2}$	B	*Banded	$1\frac{1}{2} \times \frac{3}{4} \times 1\frac{1}{2}$	C	*Banded	3 x $2\frac{1}{2} \times 3$	C
*Banded & Plain	$\frac{3}{4} \times \frac{3}{8} \times \frac{3}{4}$	B	*Banded	$1\frac{1}{2} \times 1 \times 1$	C	*Banded	3 x 3 x $\frac{3}{4}$	C
*Plain	$\frac{3}{4} \times \frac{1}{2} \times \frac{1}{4}$	B	*Banded	$1\frac{1}{2} \times 1 \times 1\frac{1}{4}$	C	*Banded	3 x 3 x 1	C
*Banded & Plain	$\frac{3}{4} \times \frac{1}{2} \times \frac{3}{8}$	B	*Banded	$1\frac{1}{2} \times 1 \times 1\frac{1}{2}$	C	*Banded	3 x 3 x $1\frac{1}{4}$	C
*Banded & Plain	$\frac{3}{4} \times \frac{1}{2} \times \frac{1}{2}$	B	*Banded	$1\frac{1}{2} \times 1\frac{1}{4} \times \frac{1}{4}$	B	*Banded	3 x 3 x $1\frac{1}{2}$	C
*Banded & Plain	$\frac{3}{4} \times \frac{1}{2} \times \frac{3}{4}$	B	*Banded	$1\frac{1}{2} \times 1\frac{1}{4} \times \frac{3}{4}$	C	*Banded	3 x 3 x 2	C
*Banded & Plain	$\frac{3}{4} \times \frac{3}{4} \times \frac{1}{4}$	B	*Banded	$1\frac{1}{2} \times 1\frac{1}{4} \times 1$	C	*Banded	3 x 3 x $2\frac{1}{2}$	C
*Banded & Plain	$\frac{3}{4} \times \frac{3}{4} \times \frac{3}{8}$	B	*Banded	$1\frac{1}{2} \times 1\frac{1}{4} \times 1\frac{1}{4}$	C	*Banded	3 x 3 x 3	C
*Banded & Plain	$\frac{3}{4} \times \frac{3}{4} \times \frac{1}{2}$	B	*Banded & Plain	$1\frac{1}{2} \times 1\frac{1}{4} \times 1\frac{1}{2}$	C	*Banded	$3\frac{1}{2} \times 3\frac{1}{2} \times 2\frac{1}{2}$	C
*Banded & Plain	$\frac{3}{4} \times \frac{3}{4} \times \frac{3}{4}$	C	*Banded	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{3}{8}$	B	*Banded	$3\frac{1}{2} \times 3\frac{1}{2} \times 3$	C
*Banded	$1\frac{1}{2} \times \frac{1}{2} \times 1$	B	*Banded	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$	B	*Banded	$3\frac{1}{2} \times 3\frac{1}{2} \times 3\frac{1}{2}$	C
*Banded & Plain	$\frac{3}{4} \times \frac{1}{2} \times 1$	B	*Banded & Plain	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{3}{4}$	C	*Banded	4 x 3 x 4	C
*Banded & Plain	$\frac{3}{4} \times \frac{3}{4} \times 1$	C	*Banded & Plain	$1\frac{1}{2} \times 1\frac{1}{2} \times 1$	C	*Banded	4 x 4 x 1	C
*Plain	1 x $\frac{3}{8} \times \frac{3}{4}$	B	*Banded & Plain	$1\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{4}$	C	*Banded	4 x 4 x $1\frac{1}{2}$	C
*Banded & Plain	1 x $\frac{3}{8} \times 1$	B	*Banded & Plain	$1\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	C	*Banded	4 x 4 x 2	C
*Banded & Plain	1 x $\frac{1}{2} \times \frac{3}{8}$	B	*Banded	1 x 1 x 2	C	*Banded	4 x 4 x $2\frac{1}{2}$	C
*Banded & Plain	1 x $\frac{1}{2} \times \frac{1}{2}$	B	*Banded	$1\frac{1}{4} \times 1\frac{1}{4} \times 2$	C	*Banded	4 x 4 x 3	C
*Banded & Plain	1 x $\frac{1}{2} \times \frac{3}{4}$	B	*Banded	$1\frac{1}{2} \times 1\frac{1}{4} \times 2$	C	*Banded	4 x 4 x $3\frac{1}{2}$	C
*Banded & Plain	1 x $\frac{1}{2} \times 1$	B	*Banded & Plain	$1\frac{1}{2} \times 1\frac{1}{2} \times 2$	C	*Banded	4 x 4 x 4	C
*Plain	1 x $\frac{3}{4} \times \frac{3}{8}$	B	*Banded	2 x $\frac{3}{8} \times 2$	B	*Banded	$4\frac{1}{2} \times 4\frac{1}{2} \times 2\frac{1}{2}$	C
*Banded & Plain	1 x $\frac{3}{4} \times \frac{1}{2}$	B	*Banded	2 x $\frac{1}{2} \times 2$	B	*Banded	5 x 5 x 2	C
*Banded & Plain	1 x $\frac{3}{4} \times \frac{3}{4}$	C	*Banded	2 x $\frac{3}{4} \times 2$	C	*Banded	5 x 5 x 3	C
*Banded & Plain	1 x $\frac{3}{4} \times 1$	C	*Banded	2 x 1 x 2	C	*Banded	5 x 5 x 4	C
*Plain	1 x 1 x $\frac{1}{4}$	B	*Banded	2 x $1\frac{1}{4} \times 1\frac{1}{4}$	C	*Banded	5 x 5 x 5	C
*Banded & Plain	1 x 1 x $\frac{3}{8}$	B	*Banded	2 x $1\frac{1}{4} \times 1\frac{1}{2}$	C	*Banded	6 x 6 x 2	C
*Banded & Plain	1 x 1 x $\frac{1}{2}$	B	*Banded	2 x $1\frac{1}{2} \times 1$	C	*Banded	6 x 6 x $2\frac{1}{2}$	C
*Banded & Plain	1 x 1 x $\frac{3}{4}$	C	*Banded	2 x $1\frac{1}{2} \times 1\frac{1}{4}$	C	*Banded	6 x 6 x 3	C
*Banded & Plain	1 x 1 x 1	C	*Banded	2 x $1\frac{1}{2} \times 1\frac{1}{2}$	C	*Banded	6 x 6 x 4	C
*Banded	$\frac{3}{4} \times \frac{3}{4} \times 1\frac{1}{4}$	C	*Banded	2 x $1\frac{1}{2} \times 2$	C	*Banded	6 x 6 x 6	C
*Banded	1 x $\frac{3}{4} \times 1\frac{1}{4}$	C	*Banded & Plain	2 x 1 x $\frac{3}{2}$	C			
*Banded & Plain	1 x 1 x $1\frac{1}{4}$	C	*Banded	2 x 2 x $\frac{3}{8}$	B			
*Banded	$1\frac{1}{4} \times \frac{3}{8} \times 1\frac{1}{4}$	B	*Banded	2 x 2 x $\frac{1}{2}$	B			

\*Also carried in stock galvanized.

## STANDARD MALLEABLE IRON FITTINGS

REVISED CLASSIFICATION—JUNE 1, 1917

## FOUR-WAY TEES

	Size	Class
*Plain	$\frac{3}{8}$	B
*Plain	$\frac{1}{2}$	B
*Plain	$\frac{3}{4}$	B
*Plain	1	B
*Plain	$1\frac{1}{4}$	B
*Plain	$1\frac{1}{2}$	B
*Plain	2	B

## SERVICE TEES

Banded	$\frac{1}{4}x$	$\frac{1}{4}x$	$\frac{1}{4}$	B
*Banded	$\frac{3}{8}x$	$\frac{3}{8}x$	$\frac{3}{8}$	B
*Banded	$\frac{1}{2}x$	$\frac{1}{2}x$	$\frac{1}{2}$	B
*Banded	$\frac{3}{4}x$	$\frac{3}{4}x$	$\frac{3}{4}$	B
*Banded	$\frac{3}{4}x$	$\frac{3}{4}x1$	B	
*Banded	1	x	$\frac{3}{4}x1$	B
*Banded	1	x1	x $\frac{3}{4}$	B
*Banded	1	x1	x1	C
*Banded	1	x1	x1 $\frac{1}{4}$	C
*Banded	$1\frac{1}{4}x$	$\frac{3}{4}x1$	$\frac{1}{4}$	C
*Banded	$1\frac{1}{4}x1$	x1 $\frac{1}{4}$	C	
*Banded	$1\frac{1}{4}x1$	$\frac{3}{4}x1$	$\frac{1}{4}$	C
Banded	$1\frac{1}{4}x1$	x1	C	
*Banded	$1\frac{1}{2}x$	$\frac{3}{4}x1\frac{1}{2}$	C	
*Banded	$1\frac{1}{2}x1$	$\frac{3}{4}x1\frac{1}{2}$	C	
*Banded	$1\frac{1}{2}x1$	$\frac{1}{2}x1\frac{1}{2}$	C	
*Banded	2	x1 $\frac{1}{2}x2$	C	
*Banded	2	x2	x2	C

## SERVICE TEES

## OTHER VARIATIONS

Banded	$\left\{ \begin{array}{l} 1\frac{1}{4} \text{ Female } x \\ 1\frac{1}{4} \text{ " } x \\ \frac{3}{4} \text{ Male } x \end{array} \right\}$	C
Banded	$\left\{ \begin{array}{l} 1 \text{ Female } x \\ 1 \text{ " } x \\ 1 \text{ Male } \end{array} \right\}$	C

## CAPS

*Plain	$\frac{1}{8}$	A
*Plain	$\frac{1}{4}$	B
*Plain	$\frac{3}{8}$	B
*Plain	$\frac{1}{2}$	B
*Plain	$\frac{3}{4}$	B
*Banded & Plain	$\frac{3}{4}$	B
*Banded & Plain	1	B
*Banded & Plain	$1\frac{1}{4}$	C
*Banded & Plain	$1\frac{1}{2}$	C
*Banded & Plain	2	C
*Banded	$2\frac{1}{2}$	C
*Banded	3	C
*Banded	$3\frac{1}{2}$	C
*Banded	4	C
*Banded	5	C
*Banded	6	C

## CROSSES

The outlets of Crosses listed below are the same size, and both are denoted by the last figure.

	Size	Class
*Plain	$\frac{1}{4}x$	$\frac{1}{4}x$ $\frac{1}{4}$ B
*Plain	$\frac{3}{8}x$	$\frac{3}{8}x$ $\frac{3}{8}$ B
*Banded & Plain	$\frac{3}{8}x$	$\frac{3}{8}x$ $\frac{3}{8}$ B
*Plain	$\frac{1}{2}x$	$\frac{1}{2}x$ $\frac{1}{2}$ B
*Plain	$\frac{1}{2}x$	$\frac{1}{2}x$ $\frac{1}{2}$ B
*Plain	$\frac{1}{2}x$	$\frac{1}{2}x$ $\frac{1}{2}$ B
*Plain	$\frac{1}{2}x$	$\frac{1}{2}x$ $\frac{1}{2}$ B
*Banded & Plain	$\frac{3}{4}x$	$\frac{3}{4}x$ $\frac{3}{4}$ B
*Plain	$\frac{3}{4}x$	$\frac{3}{4}x$ $\frac{3}{4}$ B
*Plain	$\frac{3}{4}x$	$\frac{3}{4}x$ $\frac{3}{4}$ B
*Banded & Plain	$\frac{3}{4}x$	$\frac{3}{4}x$ $\frac{3}{4}$ B
*Banded & Plain	$\frac{3}{4}x$	$\frac{3}{4}x$ $\frac{3}{4}$ B
*Banded & Plain	1	x1 x $\frac{3}{8}$ B
*Banded & Plain	1	x1 x $\frac{1}{2}$ B
*Banded & Plain	1	x1 x $\frac{3}{4}$ B
*Banded & Plain	1	x1 x1 B
*Banded	$1\frac{1}{4}x1$	x $\frac{3}{4}$ C
*Banded	$1\frac{1}{4}x1$	x1 C
*Banded	$1\frac{1}{4}x1$	$\frac{1}{4}x$ $\frac{3}{8}$ B
*Banded	$1\frac{1}{4}x1$	$\frac{1}{4}x$ $\frac{1}{2}$ B
*Banded	$1\frac{1}{4}x1$	$\frac{1}{4}x$ $\frac{3}{4}$ C
*Banded	$1\frac{1}{4}x1$	$\frac{1}{4}x1$ C
*Banded & Plain	$1\frac{1}{4}x1$	$\frac{1}{4}x1\frac{1}{4}$ C
*Banded	$1\frac{1}{2}x1$	$\frac{1}{4}x1\frac{1}{4}$ C
*Banded	$1\frac{1}{2}x1$	$\frac{1}{2}x$ $\frac{1}{2}$ B
*Banded	$1\frac{1}{2}x1$	$\frac{1}{2}x$ $\frac{3}{4}$ C
*Banded	$1\frac{1}{2}x1$	$\frac{1}{2}x1$ C
*Banded	$1\frac{1}{2}x1$	$\frac{1}{2}x1\frac{1}{4}$ C
*Banded & Plain	$1\frac{1}{2}x1$	$\frac{1}{2}x1\frac{1}{2}$ C
*Banded	2	x2 x $\frac{1}{2}$ B
*Banded	2	x2 x $\frac{3}{4}$ C
*Banded	2	x2 x1 C
*Banded & Plain	2	x2 x1 $\frac{1}{4}$ C
*Banded & Plain	2	x2 x1 $\frac{1}{2}$ C
*Banded	2	x2 x2 C
*Banded	$2\frac{1}{2}x2$	$\frac{1}{2}x1\frac{1}{2}$ C
*Banded	$2\frac{1}{2}x2$	$\frac{1}{2}x2$ C
*Banded	$2\frac{1}{2}x2$	$\frac{1}{2}x2\frac{1}{2}$ C
*Banded	3	x3 x2 C
*Banded	3	x3 x2 $\frac{1}{2}$ C
*Banded	3	x3 x3 C
*Banded	$3\frac{1}{2}x3$	$\frac{1}{2}x3\frac{1}{2}$ C
*Banded	4	x4 x2 C
*Banded	4	x4 x3 C
*Banded	4	x4 x4 C
*Banded	5	x5 x5 C
*Banded	6	x6 x6 C

## DROP ELBOWS

## FEMALE

	Size	Class
*Plain	$\frac{1}{4}x\frac{1}{4}$	B
*Plain	$\frac{3}{8}x\frac{3}{8}$	B
*Plain	$\frac{3}{8}x\frac{3}{8}$	B
*Plain	$\frac{1}{2}x\frac{1}{2}$	B
*Plain	$\frac{3}{4}x\frac{3}{4}$	B
*Plain	$\frac{3}{4}x\frac{3}{4}$	B

## DROP ELBOWS

## MALE AND FEMALE

*Plain	$\frac{1}{4}x\frac{3}{8}$	B
*Plain	$\frac{3}{8}x\frac{3}{8}$	B
*Plain	$\frac{1}{2}x\frac{3}{8}$	B
*Plain	$\frac{1}{2}x\frac{3}{8}$	B

## LONG DROP ELBOWS

*Plain	$\frac{1}{4}x\frac{3}{8}$	B
*Plain	$\frac{3}{8}x\frac{3}{8}$	B
*Plain	$\frac{1}{2}x\frac{3}{8}$	B
*Plain	$\frac{1}{2}x\frac{3}{8}$	B

## DROP TEES

## FEMALE

Plain	$\frac{3}{8}x\frac{3}{8}x\frac{1}{4}$	B
*Plain	$\frac{3}{8}x\frac{3}{8}x\frac{3}{8}$	B
*Plain	$\frac{1}{2}x\frac{3}{8}x\frac{3}{8}$	B
*Plain	$\frac{1}{2}x\frac{1}{2}x\frac{3}{8}$	B
*Plain	$\frac{1}{2}x\frac{1}{2}x\frac{1}{2}$	B
*Plain	$\frac{3}{4}x\frac{1}{2}x\frac{3}{8}$	B
*Plain	$\frac{3}{4}x\frac{3}{4}x\frac{1}{4}$	B
*Plain	$\frac{3}{4}x\frac{3}{4}x\frac{3}{8}$	B
*Plain	$\frac{3}{4}x\frac{3}{4}x\frac{1}{2}$	B
*Plain	$\frac{3}{4}x\frac{3}{4}x\frac{3}{4}$	B

## DROP TEES

## MALE AND FEMALE

*Plain	$\frac{3}{8}x\frac{3}{8}x\frac{3}{8}$	B
*Plain	$\frac{1}{2}x\frac{3}{8}x\frac{3}{8}$	B
*Plain	$\frac{1}{2}x\frac{1}{2}x\frac{3}{8}$	B
*Plain	$\frac{3}{4}x\frac{3}{4}x\frac{3}{8}$	B

## LONG DROP TEES

*Plain	$\frac{3}{8}x\frac{3}{8}x\frac{3}{8}$	B
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## OFFSETS

All Sizes	$\frac{3}{4}, 1, 1\frac{1}{4}$	B
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## EXTENSION PIECES

## MALE AND FEMALE

*	$\frac{3}{8}x$ $\frac{3}{8}$	B
*	$\frac{1}{2}x$ $\frac{1}{2}$	B
*	$\frac{3}{4}x$ $\frac{3}{4}$	B
	1 x1	B

\*Also carried in stock galvanized.



## STANDARD MALLEABLE IRON FITTINGS

REVISED CLASSIFICATION—JUNE 1, 1917

REDUCERS			RETURN BENDS				COUPLINGS		
	Size	Class	CLOSE PATTERN				RIGHT AND LEFT		
	Size	Class	Size	Dist. Between Centers	R. H. Class	R & L Class	Size	Class	
*Plain	1/4x 1/8	A	1/2	1	*B	*A	*Banded 1/4	B	
*Plain	3/8x 1/8	A	3/4	1 1/4	*B	*B	*Banded 3/8	B	
*Plain	3/8x 1/4	B	1	1 1/2	*B	*B	*Banded 1/2	B	
*Banded	1/2x 1/8	A	1 1/4	1 3/4	*C	*B	*Banded 3/4	B	
*Banded & Plain	1/2x 1/4	B	1 1/2	2 3/8	*C	*B	*Banded 1	C	
*Banded & Plain	1/2x 3/8	B	2	2 5/8	*C	*B	*Banded 1 1/4	C	
*Plain & Banded	3/4x 1/4	B	RETURN BENDS				*Banded 1 1/2	C	
*Banded & Plain	3/4x 3/8	B	MEDIUM PATTERN				*Banded 2	C	
*Banded & Plain	3/4x 1/2	B	3/4	1 1/2	*B	*B	*Banded 2 1/2	C	
*Banded	1 x 1/4	B	1	1 7/8	*B	*B	*Banded 3	C	
*Banded	1 x 3/8	B	1 1/4	2 1/4	*C	B			
*Banded	1 x 1/2	B	1 1/2	2 1/2	*C	B	COUPLINGS		
			2	3	*C	B	RIGHT HAND		
*Banded & Plain	1 x 3/4	B	RETURN BENDS				*Banded 1/4	B	
*Banded	1 1/4x 3/8	B	OPEN PATTERN				*Banded 3/8	B	
*Banded	1 1/4x 1/2	B	1/2	1 1/2	*B	A	*Banded 1/2	B	
*Banded	1 1/4x 3/4	C	3/4	2	*B	*B	*Banded 3/4	B	
*Banded & Plain	1 1/4x 1	C	1	2 1/2	*B	*B	*Banded 1	C	
*Banded	1 1/2x 1/2	B	1 1/4	3	*C	*B	*Banded 1 1/4	C	
			1 1/2	3 1/2	*C	*B	*Banded 1 1/2	C	
*Banded	1 1/2x 3/4	C	2	4	*C	*B	*Banded 2	C	
*Banded	1 1/2x 1	C	Y BENDS				*Banded 2 1/2	C	
*Banded & Plain	1 1/2x 1 1/4	C					*Banded 3	C	
*Banded	2 x 3/8	B							
*Banded	2 x 1/2	B					LOCK NUTS		
*Banded	2 x 3/4	C							
*Banded	2 x 1	C					* 1/8	A	
*Banded	2 x 1 1/4	C					* 1/4	B	
*Banded	2 x 1 1/2	C					* 3/8	B	
*Banded	2 1/2x 1	C					* 1/2	B	
*Banded	2 1/2x 1 1/4	C					* 3/4	B	
							* 1	B.	
*Banded	2 1/2x 1 1/2	C					* 1 1/4	B	
*Banded	2 1/2x 2	C					* 1 1/2	C	
*Banded	3 x 1	C					* 2	C	
*Banded	3 x 1 1/4	C					* 2 1/2	C	
*Banded	3 x 1 1/2	C					3	C	
*Banded	3 x 2	C							
*Banded	3 x 2 1/2	C					WASTE NUTS		
*Banded	3 1/2x 2	C					* 1/8	B	
*Banded	3 1/2x 2 1/2	C					* 3/8	B	
*Banded	3 1/2x 3	C					* 1/2	B	
*Banded	4 x 1	C					* 3/4	B	
*Banded	4 x 1 1/4	C					* 1	B	
							* 1 1/4	B	
*Banded	4 x 1 1/2	C					* 1 1/2	B	
*Banded	4 x 2	C							
*Banded	4 x 2 1/2	C					WALL PLATES		
*Banded	4 x 3	C							
*Banded	4 x 3 1/2	C					3/8	B	

\*Also carried in stock galvanized.

## STANDARD MALLEABLE IRON FITTINGS

## 90° STRAIGHT AND REDUCING ELBOWS



Fig. 11419A

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
1/8	.06	.08	2	.50	.90
1/4	.07	.09	2 1/2	.90	1.50
3/8	.08	.11	3	1.50	2.60
1/2	.10	.14	3 1/2	2.25	3.75
3/4	.15	.20	4	3.00	5.00
1	.22	.32	4 1/2	3.50	5.75
1 1/4	.25	.40	5	4.00	6.50
1 1/2	.35	.60	6	6.50	10.00

## 90° STREET ELBOWS



Fig. 11419C

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
1/8	.08	.10	1 1/4	.40	.55
1/4	.10	.12	1 1/2	.55	.80
3/8	.10	.12	2	.90	1.30
1/2	.12	.15	2 1/2	1.50	2.25
3/4	.20	.28	3	2.25	3.50
1	.25	.35	4	3.50	....

## 90° RIGHT AND LEFT ELBOWS

Size In.	Black	Galv.	Size In.	Black	Galv.
1/4	.09	.12	1	.25	.35
3/8	.11	.16	1 1/4	.30	.45
1/2	.13	.17	1 1/2	.40	.65
3/4	.17	.23	2	.65	1.00

## 45° ELBOWS



Fig. 11419B

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
1/4	.08	.12	2 1/2	1.25	1.90
3/8	.10	.15	3	2.50	3.75
1/2	.12	.20	3 1/2	3.25	4.75
3/4	.18	.25	4	4.50	6.75
1	.26	.40	4 1/2	5.25	7.75
1 1/4	.36	.50	5	6.00	9.00
1 1/2	.54	.85	6	7.50	11.00
2	.82	1.35	....	....	....

## 60° ELBOWS

Size Inches	PRICE, EACH	
	Black	Galvanized
1 1/4	.30	.45
1 1/2	.45	.70
2	.65	1.05

## 45° STREET ELBOWS



Fig. 11419D

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
3/8	.12	.15	1 1/2	.55	.80
1/2	.12	.15	2	.90	1.30
3/4	.20	.28	2 1/2	1.50	2.25
1	.25	.35	3	2.25	....
1 1/4	.40	.55	4	2.50	....

## SIDE OUTLET ELBOWS



Fig. 11419E

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
3/8	.08	.10	1 1/4	.45	.65
1/2	.10	.15	1 1/2	.60	.90
3/4	.18	.25	2	1.00	1.50
1	.30	.45	....	....	....

## STANDARD MALLEABLE IRON FITTINGS

## DROP ELBOWS

## FEMALE



Fig. 11420A

Size  
Inches
 $\frac{1}{4}$   
 $\frac{3}{8}$   
 $\frac{1}{2}$   
 $\frac{3}{4}$ 

PRICE, EACH	
Black	Galvanized
.06	.09
.08	.12
.12	.20
.20	.35

DROP ELBOWS  
MALE AND FEMALE

Fig. 11420B

Size  
Inches
 $\frac{3}{8}$   
 $\frac{1}{2}$ 

PRICE, EACH	
Black	Galvanized
.08	.12
.12	.20

## LONG DROP ELBOWS



Fig. 11420C

 Size  
Inches  
 $\frac{1}{4} \times \frac{3}{8}$   
 $\frac{3}{8} \times \frac{3}{8}$   
 $\frac{1}{2} \times \frac{3}{8}$   
 $\frac{1}{2} \times \frac{1}{2}$ 
Drop  
Length  
Over All  
Inches
 $2\frac{3}{8}$   
 $2\frac{1}{2}$   
 $3\frac{1}{8}$   
 $3\frac{1}{8}$ 

PRICE, EACH	
Black	Galvanized
.10	.18
.10	.18
.18	.27
.18	.27

## DROP TEES

## FEMALE



Fig. 11420D

Size  
Inches
 $\frac{3}{8}$   
 $\frac{1}{2}$   
 $\frac{3}{4}$   
 1

PRICE, EACH	
Black	Galvanized
.10	.15
.14	.25
.22	.40
.30	.55

DROP TEES  
MALE AND FEMALE

Fig. 11420E

Size  
Inches
 $\frac{3}{8}$   
 $\frac{1}{2}$   
 $\frac{3}{4}$   
 1

PRICE, EACH	
Black	Galvanized
.10	.15
.14	.25
.22	.40
.30	.55

## LONG DROP TEES

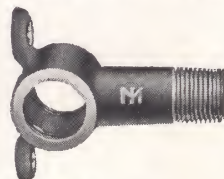


Fig. 11420F

 Size  
Inches  
 $\frac{3}{4} \times \frac{3}{4} \times \frac{1}{2}$   
 $1 \times 1 \times \frac{1}{2}$   
 $1\frac{1}{4} \times 1\frac{1}{4} \times \frac{1}{2}$ 
Drop  
Length  
Over All  
Inches
 $2\frac{1}{2}$   
 $3\frac{1}{8}$   
 $3\frac{3}{8}$   
 $3\frac{3}{4}$ 

PRICE, EACH	
Black	Galvanized
.12	.17
.30	...
.40	...
.60	...



**STANDARD MALLEABLE IRON FITTINGS****STRAIGHT TEES****Fig. 11421A**

Size In.	PRICE, EACH Black Galv.	Size In.	PRICE, EACH Black Galv.
1/8	.07 .09	2	.60 1.00
1/4	.08 .10	2 1/2	1.05 1.90
3/8	.09 .13	3	1.70 3.00
1/2	.11 .16	3 1/2	2.50 4.25
3/4	.15 .20	4	3.40 5.75
1	.25 .38	4 1/2	4.25 7.00
1 1/4	.30 .50	5	5.00 8.00
1 1/2	.45 .70	6	7.75 12.00

If R. and L. tees are desired, state, when ordering, which hole is to be tapped left-hand. Can always be furnished to order.

**REDUCING TEES****Fig. 11421B**

Size In.	PRICE, EACH Black Galv.	Size In.	PRICE, EACH Black Galv.
1/8	.07 .09	2	.60 1.00
1/4	.08 .10	2 1/2	1.05 1.90
3/8	.09 .13	3	1.70 3.00
1/2	.11 .16	3 1/2	2.50 4.25
3/4	.15 .20	4	3.40 5.75
1	.25 .38	4 1/2	4.25 6.75
1 1/4	.30 .50	5	5.00 8.00
1 1/2	.45 .70	6	7.75 12.00

**FOUR-WAY TEES****Fig. 11421C**

Size In.	PRICE, EACH Black Galv.	Size In.	PRICE, EACH Black Galv.
3/8	.12 .17	1 1/4	.50 .70
1/2	.14 .20	1 1/2	.80 1.10
3/4	.20 .28	2	1.25 1.75
1	.35 .50	...	....

**SERVICE TEES****Fig. 11421D**

Size In.	PRICE, EACH Black Galv.	Size In.	PRICE, EACH Black Galv.
3/8	.12 .15	2	1.15 1.65
1/2	.15 .20	2 1/2	2.00 2.75
3/4	.25 .35	3	2.50 3.50
1	.35 .50	3x2 1/2x3	2.50 3.50
1 1/4	.50 .70	3x3 x4	4.00 6.00
1 1/2	.75 1.10	.....	.....

**Y BENDS****STRAIGHT AND REDUCING****Fig. 11421E**

Size In.	PRICE, EACH Black Galv.
1/2	.40 .60
3/4	.50 .75
1	.60 .90
1 1/4	.80 1.25
1 1/2	1.00 1.50
2	1.70 2.50
2 1/2	2.00 3.00
3	4.00 6.00
4	5.50 8.25

**60° Y BENDS****NOT ILLUSTRATED**

Size Inches	PRICE, EACH Black Galvanized
2x2	1.70 2.50
2x1 1/2	1.70 2.50

**CROSSES****STRAIGHT AND REDUCING****Fig. 11421F**

Size In.	PRICE, EACH Black Galv.	Size In.	PRICE, EACH Black Galv.
1/4	.09 .12	2	1.00 1.50
3/8	.10 .14	2 1/2	1.75 2.75
1/2	.16 .25	3	3.00 4.50
3/4	.20 .29	3 1/2	3.25 5.00
1	.30 .45	4	5.25 8.00
1 1/4	.40 .60	5	7.50 11.00
1 1/2	.60 .90	6	13.00 19.00

## STANDARD MALLEABLE IRON FITTINGS

## COUPLINGS

## RIGHT HAND



Fig. 11422A

## RIGHT AND LEFT



Fig. 11422B

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1/4	.03	.05	1/4	.04	.06
3/8	.05	.07	3/8	.06	.09
1/2	.07	.10	1/2	.08	.10
3/4	.10	.17	3/4	.12	.17
1	.14	.23	1	.16	.25
1 1/4	.20	.30	1 1/4	.25	.35
1 1/2	.25	.40	1 1/2	.36	.55
2	.35	.55	2	.52	.75
2 1/2	.60	.95	2 1/2	.70	1.05
3	.90	1.40	3	1.00	1.50

## OFFSET REDUCING COUPLINGS



Fig. 11422C

This fitting is the same as a male and female reducer, except that the inlet and outlet are on the same level. By its use water pockets are prevented.

Size Inches	Price Each	Size Inches	Price Each	Size Inches	Price Each
1 x 3/4	.60	2 1/2 x 2	1.80	4 x 3 1/2	4.00
1 1/4 x 1	.70	3 x 2 1/2	2.50	4 1/2 x 4	5.00
1 1/2 x 1 1/4	.90	3 1/2 x 3	3.00	5 x 4	6.00
2 x 1 1/2	1.10	4 x 3	4.00	5 x 4 1/2	6.00

## REDUCERS



Fig. 11422D

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1/4	.05	.08	1 1/2	.28	.45
3/8	.06	.10	2	.45	.75
1/2	.07	.10	2 1/2	.70	1.05
3/4	.10	.15	3	1.00	1.65
1	.16	.25	3 1/2	1.50	2.40
1 1/4	.20	.35	4	1.85	3.05

## OFFSETS



Fig. 11422E

Size Inches	Offset Inches		Length Inches	Price Each
	1 1/2	3 1/4		
3/4	1 1/2	3 1/4		.25
1	1 1/2	4		.40
1 1/4	2	5 3/8		.75

## CAPS



Fig. 11422F

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1/4	.03	.04	2	.32	.52
3/8	.04	.05	2 1/2	.45	.76
1/2	.05	.08	3	.85	1.30
3/4	.08	.12	3 1/2	1.00	1.60
1	.12	.17	4	1.20	2.00
1 1/4	.16	.24	5	2.50	3.50
1 1/2	.24	.38	6	3.50	5.00

Hexagon malleable cups can be furnished, sizes 1/4, 3/8 and 1/2 inch at special price.

## CROSS OVERS



Fig. 11422G

Size Inches	PRICE, EACH	
	Black	Galvanized
1/2	.20	.25
3/4	.30	.40
1	.45	.60

## WASH TRAY TEES



Fig. 11422H

Made of malleable iron, galvanized.

Size Inches	Price Each
1/2	.20
3/4	.30

## STANDARD MALLEABLE IRON FITTINGS

## RETURN BENDS

## CLOSE PATTERN



Fig. 11423A

Size Inches	Center to Center Inches	PRICE, EACH			
		RIGHT HAND		RIGHT AND LEFT	
		Black	Galv.	Black	Galv.
$\frac{1}{2}$	1	.18	.25	.23	.35
$\frac{3}{4}$	$1\frac{1}{4}$	.25	.35	.30	.40
1	$1\frac{1}{2}$	.35	.55	.45	.65
$1\frac{1}{4}$	$1\frac{3}{4}$	.50	.75	.60	.85
$1\frac{1}{2}$	$2\frac{3}{16}$	.75	1.15	.90	1.30
2	$2\frac{5}{8}$	1.00	1.65	1.25	1.90

Close pattern return bends will not make up parallel coils, as the distance, center to center of two adjacent bends, is greater than the center to center of openings of a single bend.

## MEDIUM PATTERN



Fig. 11423C

Size Inches	Center to Center Inches	PRICE, EACH			
		RIGHT HAND		RIGHT AND LEFT	
		Black	Galv.	Black	Galv.
$\frac{1}{2}$	$1\frac{1}{4}$	.18	.25	.23	...
$\frac{3}{4}$	$1\frac{1}{2}$	.25	.35	.30	.40
1	$1\frac{7}{8}$	.35	.55	.45	.65
$1\frac{1}{4}$	$2\frac{1}{4}$	.50	.75	.60	...
$1\frac{1}{2}$	$2\frac{1}{2}$	.75	1.15	.90	...
2	3	1.00	1.65	1.25	...

## SPECIAL WIDE PATTERN

## RIGHT HAND



Fig. 11423D

## OPEN PATTERN



Fig. 11423B

Size Inches	Center to Center Inches	PRICE, EACH			
		RIGHT HAND		RIGHT AND LEFT	
		Black	Galv.	Black	Galv.
$\frac{1}{2}$	$1\frac{1}{2}$	.20	.28	.25	...
$\frac{3}{4}$	2	.30	.45	.38	.55
1	$2\frac{1}{2}$	.50	.70	.60	.80
$1\frac{1}{4}$	3	.65	.90	.80	1.05
$1\frac{1}{2}$	$3\frac{1}{2}$	.85	1.25	1.05	1.50
2	4	1.25	2.00	1.55	2.40
$2\frac{1}{2}$	$4\frac{1}{2}$	2.00	3.50	2.50	...
3	5	3.00	5.00	3.75	...

Size Inches	Center to Center Inches	PRICE, EACH	
		Black	Galv.
$\frac{3}{8}$	$1\frac{1}{2}$	.25	.30
$\frac{3}{4}$	4	1.00	1.35
$\frac{3}{4}$	6	1.25	1.65
1	6	1.25	1.70
$1\frac{1}{4}$	6	1.25	1.70
$1\frac{1}{2}$	6	2.00	2.75
2	5	3.00	4.00
2	6	4.00	5.00
3	$7\frac{1}{2}$	5.00	6.50
3	8	5.00	6.50
4	6	8.00	...
6	12	16.00	...



## STANDARD MALLEABLE IRON FITTINGS

## BUSHINGS



Fig. 11424A

## REDUCING ONE SIZE ONLY

Size In.	PRICE, EACH Black	Galv.	Size In.	PRICE, EACH Black	Galv.
1/4	.04	.08	1 1/4	.07	.14
3/8	.04	.08	1 1/2	.09	.18
1/2	.04	.08	2	.14	.28
3/4	.05	.10	2 1/2	.21	.42
1	.06	.12	...	...	...

## FACED BUSHINGS



Fig. 11424B

Size In.	PRICE, EACH Black	Galv.	Size In.	PRICE, EACH Black	Galv.
3/8	.08	.12	2 1/2	.48	.72
1/2	.09	.14	3	.70	1.05
3/4	.11	.17	3 1/2	1.20	1.80
1	.13	.20	4	1.50	2.25
1 1/4	.17	.25	4 1/2	2.10	3.15
1 1/2	.22	.33	5	2.60	3.90
2	.32	.48	6	3.75	5.60

## LOCKNUTS



Fig. 11424C

Size In.	PRICE, EACH Black	Galv.	Size In.	PRICE, EACH Black	Galv.
1/4	.02	.03	1	.07	.10
3/8	.03	.04	1 1/4	.09	.14
1/2	.04	.05	1 1/2	.11	.20
3/4	.05	.07	2	.18	.30

## WASTE NUTS



Fig. 11424D

Size In.	PRICE, EACH Black	Galv.
1/4	.04	.08
3/8	.05	.10
1/2	.06	.12
3/4	.08	.16
1	.10	.20
1 1/4	.15	.30
1 1/2	.25	.50

## HEXAGON NIPPLES

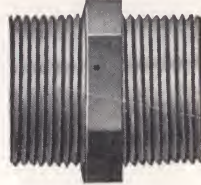


Fig. 11424E

Size Inches	Black Price Each	Size Inches	Black Price Each	Size Inches	Black Price Each
1/4	.20	1	.30	2 1/2	1.10
3/8	.20	1 1/4	.40	3	1.50
1/2	.20	1 1/2	.50	3 1/2	1.90
3/4	.25	2	.70	4	2.40

Hexagon nipples are regularly furnished right and left hand. Right hand at special prices.

## EXTENSION PIECES



Fig. 11424F

Size Inches	PRICE, EACH Black	Galv.
3/8	.06	.09
1/2	.09	.13
3/4	.12	.18
1	.14	.21

## CHANDELIER HOOKS



Fig. 11424G

Size Inches
3/8
1/2

Price Each
.10
.12

## CHANDELIER LOOPS



Fig. 11424H

Size Inches
3/8
1/2

Price Each
.10
.12

## WALL PLATES



Fig. 11424J

Size Inches
3/8
1/2
3/4

Price Each
.12
.16
.30

## STREET WASHER KEYS, HYDRANT CLAMPS, ETC.

### STREET WASHER KEYS

MALLEABLE IRON



Fig. 8670A

Price.....per pound .15

### STREET WASHER GUIDE AND CHECKS

CAST IRON

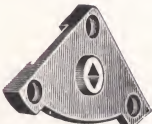


Fig. 8670B

Price.....per pound .15

### No. 1 HYDRANT HANDLES

MALLEABLE IRON



Fig. 8670C

Has  $\frac{3}{8}$ -inch pipe thread.

Price.....per pound .20

### No. 2 HYDRANT HANDLES

MALLEABLE IRON



Fig. 8670D

For  $\frac{3}{8}$ -inch square rod.

Price.....per pound .15

### HYDRANT CLAMPS

MALLEABLE IRON

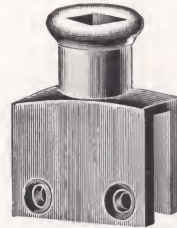


Fig. 8670E

Price, for Square Rod....per pound .15  
 " "  $\frac{3}{8}$ -inch I. P.... " .18  
 " "  $\frac{1}{2}$  " I. P.... " .20

### HYDRANT SOCKETS

MALLEABLE IRON



Fig. 8670F

Price.....per pound .15

### HYDRANT ROD RESTS

CAST IRON



Fig. 8670G

Price.....per dozen .96

### LOAFER CUSHIONS

CAST IRON



Fig. 8670H

Made to fit 1,  $1\frac{1}{4}$ ,  $1\frac{1}{2}$  and 2-inch rail.  
 Length, 23 inches.

Price, per Section.....each .35

## NOKOROS UNIONS

(PATENTED)

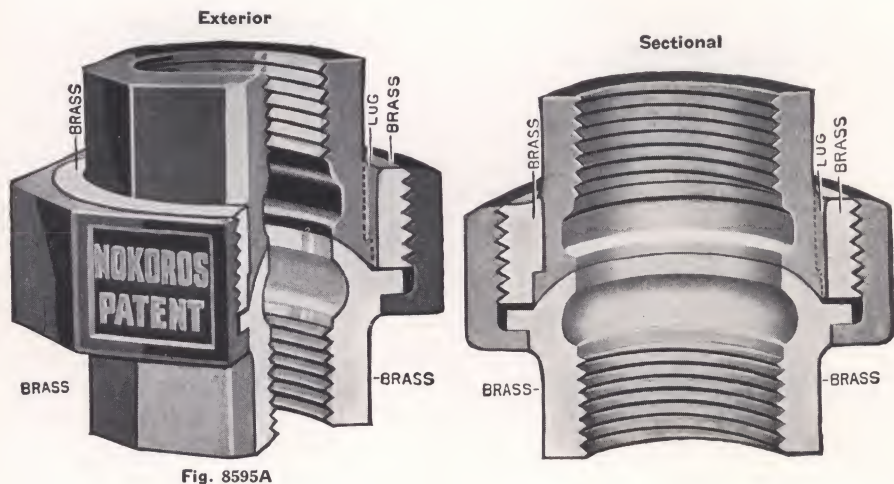


Fig. 8595A

The Nokoros Union is the only union made absolutely non-corrosive brass to iron at all contact points.

The advantage is that if there is any reason to disconnect the joint at any future time, same can be readily done as the brass to iron joint will not rust together as an "iron to iron" joint will do.

Further, a brass to iron thread connection at the ring—a thread connection of two different metals will not rust together and the joint can be disconnected and reconnected as often as may be necessary.

These unions are made with octagon ends so an ordinary monkey wrench will tighten the sections.

All Nokoros Unions are subjected to the severest test yet devised; namely, compressed air under water—the union is connected with a high pressure air line, placed under water and if any leaks are present the tiny air bubbles tell the story.

The Nokoros Unions are made of Imico refined air furnace malleable iron and the best grade of steam metal and they have earned the good opinion of those who have used them.

Size Inches	PRICE, EACH	
	Plain	Galvanized
1/8	.30	.45
1/4	.30	.45
3/8	.40	.60
1/2	.50	.75
3/4	.60	.90
1	.80	1.20

Size Inches	PRICE, EACH	
	Plain	Galvanized
1 1/4	1.20	1.80
1 1/2	1.60	2.40
2	2.00	3.00
2 1/2	3.20	4.80
3	4.80	7.20
...	....	....



## C. D. RAILROAD UNIONS

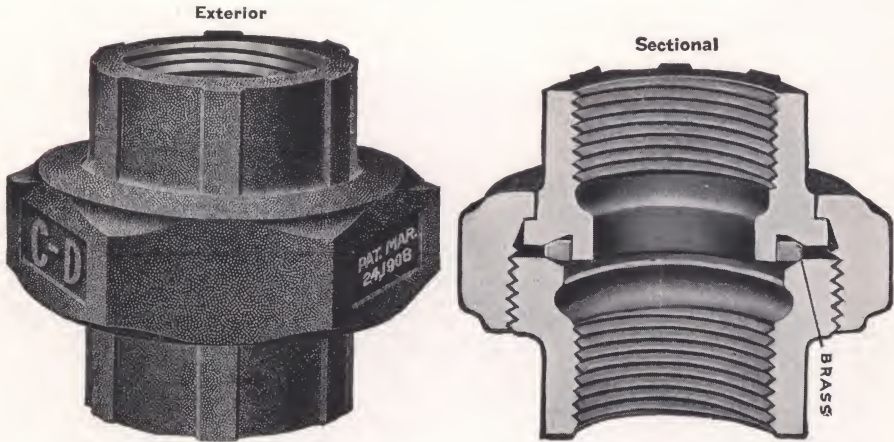


Fig. 8596A

The C. D. Railroad Unions are made of Imico refined air furnace malleable iron and have a bronze disc seat.

The cost of a gasket is saved and a real valve seat joint is made—as will be noted by referring to the sectional view. It may be observed that the face of each threaded section is beveled to receive a bronze disc—the act of connecting or turning the nut or ring brings the two sections together, compressing the bronze disc against the recesses. This makes a perfectly tight joint for steam, gas, oil, water or other fluids.

The joint being iron against brass, is non-corrosive and the union can be disconnected and used again.

The C. D. Railroad Unions have long threaded ends and are extra heavy. Each union is tested by air under water and will be found tight.

We recommend them as moderate priced combination brass and iron unions.

Size Inches	PRICE, EACH	
	Plain	Galvanized
$\frac{1}{8}$	.30	.45
$\frac{1}{4}$	.30	.45
$\frac{3}{8}$	.40	.60
$\frac{1}{2}$	.50	.75
$\frac{3}{4}$	.60	.90
1	.80	1.20

Size Inches	PRICE, EACH	
	Plain	Galvanized
$1\frac{1}{4}$	1.20	1.80
$1\frac{1}{2}$	1.60	2.40
2	2.00	3.00
$2\frac{1}{2}$	3.20	4.80
3	4.80	7.20
...	....	....

# STANDARD MALLEABLE IRON UNIONS

## SCREWED

### STANDARD FEMALE UNIONS

For Steam Working Pressures Up to  
150 Pounds

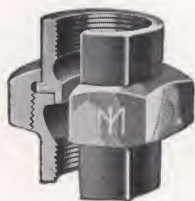


Fig. 8601A

Size Inches	PRICE, EACH Black	Galv.	Size Inches	PRICE, EACH Black	Galv.
$\frac{1}{8}$	.18	.27	$1\frac{1}{2}$	.58	.90
$\frac{1}{4}$	.18	.27	2	.75	1.15
$\frac{3}{8}$	.20	.30	$2\frac{1}{2}$	1.55	2.35
$\frac{1}{2}$	.22	.33	3	2.10	3.15
$\frac{3}{4}$	.27	.40	$3\frac{1}{2}$	3.65	5.50
1	.33	.50	4	4.35	6.50
$1\frac{1}{4}$	.46	.70	...	....	....

Gaskets extra.

### STANDARD TWO-THIRD UNIONS

For Steam Working Pressures Up to  
150 Pounds



Fig. 8601C

Size Inches	PRICE, EACH Black	Galv.	Size Inches	PRICE, EACH Black	Galv.
$\frac{1}{4}$	.12	.18	$1\frac{1}{2}$	.40	.60
$\frac{3}{8}$	.14	.20	2	.50	.75
$\frac{1}{2}$	.16	.22	$2\frac{1}{2}$	1.00	1.60
$\frac{3}{4}$	.19	.25	3	1.40	2.10
1	.22	.35	$3\frac{1}{2}$	2.40	3.70
$1\frac{1}{4}$	.30	.50	4	3.00	4.35

Gaskets extra.

### STANDARD MALE AND FEMALE UNIONS

For Steam Working Pressures Up to  
150 Pounds

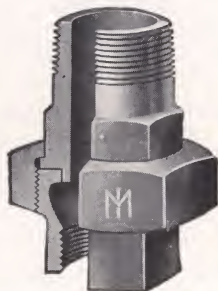


Fig. 8601B

Size Inches	PRICE, EACH Black	Galv.	Size Inches	PRICE, EACH Black	Galv.
$\frac{1}{4}$	.23	.32	$1\frac{1}{4}$	.57	.81
$\frac{3}{8}$	.25	.35	$1\frac{1}{2}$	.72	1.04
$\frac{1}{2}$	.28	.39	2	.95	1.35
$\frac{3}{4}$	.33	.46	$2\frac{1}{2}$	1.95	2.75
1	.40	.57	...	....	....

Gaskets extra.

### STANDARD FLANGE UNIONS

For Steam Working Pressures Up to  
125 Pounds

#### MALLEABLE IRON



Fig. 8601D

Size Inches	Diam. Flanges Inches	No. of Bolts in Each	PRICE, EACH Black	Gal- vanized
$\frac{3}{4}$	$2\frac{7}{8}$	3	1.40	2.80
1	$3\frac{1}{4}$	4	1.60	3.20
$1\frac{1}{4}$	$3\frac{3}{4}$	4	2.00	4.00
$1\frac{1}{2}$	$4\frac{5}{8}$	4	2.50	5.00
2	$5\frac{1}{2}$	4	3.00	6.00
$2\frac{1}{2}$	6	4	3.50	7.00
3	$6\frac{3}{4}$	4	4.40	8.80
$3\frac{1}{2}$	$7\frac{1}{2}$	4	5.25	10.50
4	8	5	6.00	12.00
$4\frac{1}{2}$	$8\frac{5}{8}$	5	7.00	14.00
5	$9\frac{3}{8}$	5	8.00	16.00
6	$10\frac{5}{8}$	6	9.00	18.00
8	$13\frac{1}{8}$	7	18.00	36.00

## UNION ELBOWS AND TEES

## MALLEABLE IRON

## UNION ELBOWS

## FEMALE



Fig. 8602A

Size Inches	PRICE, EACH	
	Black	Galvanized
$\frac{1}{4}$	.38	.57
$\frac{3}{8}$	.40	.60
$\frac{1}{2}$	.42	.63
$\frac{3}{4}$	.54	.81
1	.63	.95
$1\frac{1}{4}$	.90	1.35
$1\frac{1}{2}$	1.05	1.58
2	1.55	2.35
$2\frac{1}{2}$	2.85	4.30

## UNION TEES

## FEMALE



Fig. 8602C

Size Inches	PRICE, EACH	
	Black	Galvanized
$\frac{1}{4}$	.40	.60
$\frac{3}{8}$	.43	.65
$\frac{1}{2}$	.45	.68
$\frac{3}{4}$	.57	.86
1	.70	1.05
$1\frac{1}{4}$	.95	1.45
$1\frac{1}{2}$	1.15	1.75
2	1.70	2.55
$2\frac{1}{2}$	3.20	4.80

## UNION ELBOWS

## MALE



Fig. 8602B

Size Inches	PRICE, EACH	
	Black	Galvanized
$\frac{1}{4}$	.43	.65
$\frac{3}{8}$	.45	.70
$\frac{1}{2}$	.48	.72
$\frac{3}{4}$	.62	.93
1	.72	1.08
$1\frac{1}{4}$	1.05	1.60
$1\frac{1}{2}$	1.20	1.80
2	1.80	2.70
$2\frac{1}{2}$	3.30	4.95

## UNION TEES

## MALE



Fig. 8602D

Size Inches	PRICE, EACH	
	Black	Galvanized
$\frac{1}{4}$	.48	.72
$\frac{3}{8}$	.50	.75
$\frac{1}{2}$	.52	.78
$\frac{3}{4}$	.65	1.00
1	.80	1.20
$1\frac{1}{4}$	1.10	1.65
$1\frac{1}{2}$	1.30	1.95
2	1.95	2.95
$2\frac{1}{2}$	3.70	5.55



## MALLEABLE IRON FITTINGS

### No. 1 BOILER ELBOWS

GALVANIZED



Fig. 8605A

Size Inches	Price Each	Size Inches	Price Each
$\frac{3}{4} \times \frac{3}{4} \times 1$	.40	$\frac{1}{2} \times \frac{1}{2} \times 1$	.40
$\frac{3}{4} \times 1 \frac{1}{2} \times 1$	.40	.....	...

### No. 2 UNION BOILER ELBOWS

GALVANIZED



Fig. 8605B

Size Inches	Price Each	Size Inches	Price Each
$\frac{3}{4} \times \frac{3}{4} \times 1$	.75	$\frac{1}{2} \times \frac{1}{2} \times 1$	.60
$\frac{3}{4} \times 1 \frac{1}{2} \times 1$	.75	.....	...

### NEW STYLE UNION BOILER ELBOWS

GALVANIZED



Fig. 8605C

Size Inches	Price Each	Size Inches	Price Each
$\frac{3}{4} \times \frac{3}{4} \times 1$	.75	$\frac{1}{2} \times \frac{1}{2} \times 1$	.60
$\frac{3}{4} \times 1 \frac{1}{2} \times 1$	.75	.....	...

### No. 3 BOILER COUPLINGS

GALVANIZED

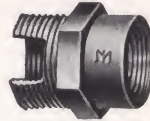


Fig. 8605D

Size Inches	Price Each	Size Inches	Price Each
$\frac{3}{4} \times \frac{3}{4} \times 1$	.40	$\frac{1}{2} \times \frac{1}{2} \times 1$	.40
$\frac{3}{4} \times 1 \frac{1}{2} \times 1$	.40	.....	...

### No. 4 UNION BOILER COUPLINGS

GALVANIZED



Fig. 8605E

Size Inches	Price Each	Size Inches	Price Each
$\frac{3}{4} \times \frac{3}{4} \times 1$	.75	$\frac{1}{2} \times \frac{1}{2} \times 1$	.60
$\frac{3}{4} \times 1 \frac{1}{2} \times 1$	.75	.....	...

### NEW STYLE UNION BOILER COUPLINGS

GALVANIZED



Fig. 8605F

Size Inches	Price Each	Size Inches	Price Each
$\frac{3}{4} \times \frac{3}{4} \times 1$	.75	$\frac{1}{2} \times \frac{1}{2} \times 1$	.60
$\frac{3}{4} \times 1 \frac{1}{2} \times 1$	.75	.....	...

### LAWLER BOILER UNION TEES

GALVANIZED



Fig. 8605G

For bottom connection of range boiler.

Size 1-inch male,  $\frac{3}{4}$ -inch union,  $\frac{1}{2}$ -inch draw off.

Price.....each .60

# BALL PATTERN RAILING FITTINGS

## MALLEABLE IRON

### No. 1 ELBOWS

Size Inches	Price Each
$\frac{1}{2}$	.15
$\frac{3}{4}$	.18
1	.20
$1\frac{1}{4}$	.35
$1\frac{1}{2}$	.45
2	.72
$2\frac{1}{2}$	1.60
3	2.25



Fig. 8402A

### No. 5 CROSSES

Size Inches	Price Each
$\frac{1}{2}$	.30
$\frac{3}{4}$	.33
1	.35
$1\frac{1}{4}$	.45
$1\frac{1}{2}$	.58
2	1.00
$2\frac{1}{2}$	1.80
3	2.60



Fig. 8402E

### No. 2 SIDE OUTLET ELBOWS

Size Inches	Price Each
$\frac{1}{2}$	.20
$\frac{3}{4}$	.23
1	.25
$1\frac{1}{4}$	.40
$1\frac{1}{2}$	.50
2	.80
$2\frac{1}{2}$	1.75
3	2.50



Fig. 8402B

### No. 6 SIDE OUTLET CROSSES

Size Inches	Price Each
$\frac{1}{2}$	.35
$\frac{3}{4}$	.38
1	.40
$1\frac{1}{4}$	.50
$1\frac{1}{2}$	.65
2	1.35
$2\frac{1}{2}$	2.00
3	2.75



Fig. 8402F

### No. 3 TEES

Size Inches	Price Each
$\frac{1}{2}$	.20
$\frac{3}{4}$	.23
1	.25
$1\frac{1}{4}$	.40
$1\frac{1}{2}$	.50
2	.75
$2\frac{1}{2}$	1.75
3	2.50



Fig. 8402C

### No. 4 SIDE OUTLET TEES

Size Inches	Price Each
$\frac{1}{2}$	.30
$\frac{3}{4}$	.33
1	.35
$1\frac{1}{4}$	.45
$1\frac{1}{2}$	.55
2	.90
$2\frac{1}{2}$	1.90
3	2.60



Fig. 8402D

### No. 7 FLANGES

Size In.	Price Each	Size In.	Price Each
$\frac{1}{2}$	.14	$1\frac{1}{4}$	.20
$\frac{3}{4}$	.15	$1\frac{1}{2}$	.28
1	.15	2	.30

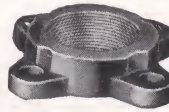


Fig. 8402G

### No. 8 ACORNS

Size In.	Price Each	Size In.	Price Each
$\frac{1}{2}$	.16	$1\frac{1}{2}$	.35
$\frac{3}{4}$	.18	2	.90
$1\frac{1}{4}$	.20	$2\frac{1}{2}$	1.35
$1\frac{1}{2}$	.25	3	2.00



Fig. 8402H

### No. 9 FLANGES

Size In.	Price Each	Size In.	Price Each
$\frac{1}{2}$	.16	$1\frac{1}{2}$	.50
$\frac{3}{4}$	.18	2	.90
1	.20	$2\frac{1}{2}$	1.35
$1\frac{1}{4}$	.40	3	2.50



Fig. 8402J

In ordering railing fittings, describe kind wanted by number and size. Railing fittings will always be furnished with all openings tapped right-hand unless otherwise specified. Railing fittings tapped right and left or left-hand will be charged for at 15 per cent additional, net. For galvanized railing fittings, add 50 per cent to above list.

## ADJUSTABLE RAILING FITTINGS

### MALLEABLE IRON

**No. 70 ELBOWS****Fig. 8403A**

Pipe Size...in.	1	1¼	1½	2
Price....each	1.10	1.25	1.70	2.25

**No. 70½ SPECIAL ELBOWS****Fig. 8403B**

Pipe Size...in.	1	1¼	1½	2
Price....each	.80	.90	1.20	1.65

**No. 71 TEES****Fig. 8403C**

Pipe Size...in.	1	1¼	1½	2
Price....each	1.30	1.50	2.00	2.50

**No. 72 STAIR TEES****Fig. 8403D**

Pipe Size...in.	1	1¼	1½	2
Price....each	1.30	1.60	2.15	2.50

**No. 73 CROSSES****Fig. 8403F**

Pipe Size...in.	1	1¼	1½	2
Price....each	1.50	1.75	2.35	2.75

**No. 74 STAIR CROSSES****Fig. 8403F**

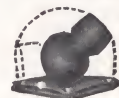
Pipe Size...in.	1	1¼	1½	2
Price....each	1.50	1.85	2.50	2.75

**No. 75 STAIR LANDING TEES****Fig. 8403G**

Pipe Size...in.	1	1¼	1½	2
Price....each	.90	1.10	1.50	2.15

**No. 76 STAIR LANDING CROSSES****Fig. 8403H**

Pipe Size...in.	1	1¼	1½	2
Price....each	1.00	1.20	1.60	2.40

**No. 79 FLANGES****Fig. 8403J**

Pipe Size...in.	1	1¼	1½	2
Price....each	1.65	1.75	1.90	2.50

Add 50 per cent to above prices for galvanized railing fittings.

Almost any angle required for stair railings may be obtained with these fittings.

All openings will be furnished tapped right-hand. When ordered tapped otherwise they will be charged 15 per cent additional net.

In ordering describe kind wanted by number and size.



## PUMP ROD COUPLINGS AND CLEVISES

## WOOD ROD COUPLINGS



**Fig. 8502A**

These couplings are made with a socket for the ends of the rod to be driven into to avoid splitting.

Price, 5-inch, Light, Ribbed, for 1 and 1 1/8-inch Rods, Plain, Two-hole . . . per set	.40
" 5 " " " 1 " 1 1/8 " " Galv. " " " " " "	.50
" 6 " Heavy, Plain " 1 " 1 1/8 " " Plain Three " " " " " "	.60
" 6 " " " " 1 " 1 1/8 " " Galv. " " " " " "	.80

## HEXAGON ROD COUPLINGS



**Fig. 8502B**

## BEADED IRON ROD COUPLINGS



**Fig. 8502D**

Made in malleable iron and brass.

Size Rods Inches	Threads per Inch	PRICE, PER POUND		
		Plain	Galva- nized	Brass
$\frac{3}{8}$	†14	.32	.40	1.00
$\frac{3}{8}$	*16	.32	.40	1.00
$\frac{3}{8} \times \frac{7}{16}$	14 x 12	.32	.40	1.00
$\frac{7}{16}$	12	.32	.40	1.00
$\frac{7}{16} \times \frac{1}{2}$	12	.32	.40	1.00
$\frac{1}{2}$	12	.32	.40	1.00
$\frac{5}{8}$	11	.32	.40	1.00
$\frac{5}{8}$	10	.32	.40	1.00
$\frac{3}{4}$				

†Regular. \*Special.

Made in malleable iron.

Size Rods Inches	Threads per Inch	PRICE, PER POUND Plain	Galva- nized
$\frac{3}{8}$	†14	.32	.40
$\frac{3}{8}$	*16	.32	.40
$\frac{3}{8} \times \frac{7}{16}$	14x12	.32	.40
$\frac{7}{16}$	12	.32	.40
$\frac{7}{16} \times \frac{1}{2}$	12	.32	.40
$\frac{1}{2}$	12	.32	.40
$\frac{5}{8}$	11	.32	.40
$\frac{3}{4}$	10	.32	.40
†Regular.	*Special.		

## REDUCER ROD COUPLINGS



**Fig. 8502C**

For  $\frac{3}{8}$  and  $\frac{1}{2}$ -inch pipe and steel pump rods. Couplings are furnished for  $\frac{3}{8}$  and  $\frac{7}{8}$ -inch rods to suit either  $\frac{3}{8}$  or  $\frac{1}{2}$ -inch iron pipe, male thread.

Plain or galvanized malleable iron.

Price, Plain.....per pound	.50
“ Galvanized.....“	.60

## HOSE CLEVISES



**Fig. 8502E**

Malleable iron,  $\frac{3}{4}$  or 1-inch.

Price.....each **.50**

# DRIVE SHOES, SUCTION STRAINERS, ETC.

## DRIVE SHOES

No. 433



Fig. 8510A

No. 419



Fig. 8510B

No. 421



Fig. 8510C

Size Inches	No. 433 Malleable Iron	No. 419 Steel Rough	No. 419 Steel Finished	No. 421 Forged Steel
2	1.00	1.60	2.00	3.00
2½	1.40	2.20	2.60	5.00
3	1.80	3.00	4.00	7.00
3½	2.40	5.00	7.00	10.00
4	3.00	5.50	8.00	12.00
4½	....	7.50	12.00	16.00
5	....	8.50	14.00	20.00
5½	....	13.00	18.00	....
6	....	13.00	18.00	24.00
7	....	....	....	30.00
8	....	16.00	24.00	36.00
10	....	25.00	36.00	72.00
12	....	50.00	70.00	96.00
14	....	....	....	140.00
15	....	....	....	180.00
16	....	....	....	220.00

## MALLEABLE IRON DRIVING CAPS

For receiving blows from wood mauls or iron sledges. Extra heavy.



Fig. 8510D

Size Inches	Price Each
1¼	.40
1½	.48
2	.88
2½	2.00
3	3.00

## SUCTION PIPE STRAINERS

With Set Screw



Fig. 8510E

With Male Thread

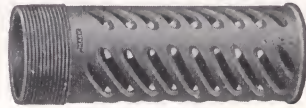


Fig. 8510F

With Female Thread



Fig. 8510G

Size Inches	PRICE, EACH		Black without Brass Gauze
	With Brass Gauze	Without Brass Gauze	
¾	.56	.44	.36
1	.56	.44	.36
1¼	.64	.48	.40
1½	.72	.52	.48
2	1.00	.80	.72

## GLOBE STRAINERS FOR HOSE



Fig. 8510H

Size In.	Black Each	Galvanized Each	Brass Each
1¼	1.00	1.20	5.50
1½	1.30	1.50	5.50
2	2.00	2.50	7.00

## **STANDARD CAST IRON FLAT BAND SCREWED FITTINGS**

**For Steam Working Pressures Up to 125 Pounds**

**For Water Working Pressures Up to 175 Pounds**

We take special care in making our cast iron fittings to secure a uniform quality of iron, and take all possible precautions to exercise care in tapping, and we can confidently recommend our output such as will merit your approval.

All fittings are recessed or chamfered permitting an easy entrance of the pipe, and are threaded strictly according to the American Briggs gauge.

The general design of our fittings commends itself to all critical buyers; they are well proportioned, of right weight and generally suitable for steam working pressures, if properly installed, not exceeding 125 pounds, or for water working pressures up to 175 pounds.

These fittings have been subjected to tests which show a large factor of safety when used at these pressures, but there are so many other conditions, such as strains of expansion and contraction, the sagging of pipe lines, water hammer and other causes that it is not safe to base conclusions as to working strains entirely on the thickness or weight.

When cast iron fittings are wanted for greater steam working pressure than 125 pounds, we recommend the use of extra heavy fittings, which are suitable generally, if properly installed, for 250 pounds steam working pressure.

### **VARIETY OF SIZES**

We enumerate on pages 24, 25, 26 and 27 standard sizes usually carried in stock, which we think are fully sufficient to meet the requirements of the trade. Fittings can be made to order if necessary, but as there is considerable expense involved in making special fittings, we recommend the use of bushings. If, however, fittings without bushings are absolutely necessary, a special price will be charged, which will be given upon receipt of specifications.

### **GALVANIZED CAST IRON FITTINGS**

We carry a large stock of galvanized cast iron fittings, including all straight sizes and the leading reducing sizes; those not regularly carried in stock can be made to order.



# **STANDARD CAST IRON FLAT BAND SCREWED FITTINGS** LIST OF SIZES

**ELBOWS**

90°



Reducing



$\frac{1}{4}$ x $\frac{1}{4}$	2 x 2	4 x $2\frac{1}{2}$
$\frac{3}{8}$ x $\frac{3}{8}$	2 x $1\frac{1}{2}$	4 x 2
$\frac{3}{8}$ x $\frac{1}{2}$	2 x $1\frac{1}{4}$	$4\frac{1}{2}$ x $4\frac{1}{2}$
$\frac{1}{2}$ x $\frac{1}{2}$	2 x 1	$4\frac{1}{2}$ x 4
$\frac{1}{2}$ x $\frac{3}{8}$	2 x $\frac{3}{4}$	5 x 5
$\frac{1}{2}$ x $\frac{1}{4}$	$2\frac{1}{2}$ x $2\frac{1}{2}$	5 x $4\frac{1}{2}$
$\frac{3}{4}$ x $\frac{3}{4}$	$2\frac{1}{2}$ x 2	5 x 4
$\frac{3}{4}$ x $\frac{1}{2}$	$2\frac{1}{2}$ x $1\frac{1}{2}$	5 x 3
$\frac{3}{4}$ x $\frac{3}{8}$	$2\frac{1}{2}$ x $1\frac{1}{4}$	5 x $2\frac{1}{2}$
1 x 1	$2\frac{1}{2}$ x 1	6 x 6
1 x $\frac{3}{4}$	3 x 3	6 x 5
1 x $\frac{1}{2}$	3 x $2\frac{1}{2}$	6 x 4
1 x $\frac{3}{8}$	3 x 2	7 x 7
$1\frac{1}{4}$ x $1\frac{1}{4}$	3 x $1\frac{1}{2}$	7 x 6
$1\frac{1}{4}$ x 1	3 x $1\frac{1}{4}$	8 x 8
$1\frac{1}{4}$ x $\frac{3}{4}$	$3\frac{1}{2}$ x $3\frac{1}{2}$	8 x 7
$1\frac{1}{4}$ x $\frac{1}{2}$	$3\frac{1}{2}$ x 3	8 x 6
$1\frac{1}{4}$ x $\frac{3}{8}$	$3\frac{1}{2}$ x $2\frac{1}{2}$	9 x 9
$1\frac{1}{2}$ x $1\frac{1}{2}$	$3\frac{1}{2}$ x 2	10 x 10
$1\frac{1}{2}$ x $1\frac{1}{4}$	4 x 4	10 x 8
$1\frac{1}{2}$ x 1	4 x $3\frac{1}{2}$	12 x 12
$1\frac{1}{2}$ x $\frac{3}{4}$	4 x 3	.....

**45° ELBOWS**

$\frac{1}{4}$	$1\frac{1}{4}$	$3\frac{1}{2}$	7
$\frac{3}{8}$	$1\frac{1}{2}$	4	8
$\frac{1}{2}$	2	$4\frac{1}{2}$	9
$\frac{3}{4}$	$2\frac{1}{2}$	5	10
1	3	6	12

**RIGHT AND LEFT ELBOWS**

$\frac{1}{4}$	$\frac{1}{2}$	1	$1\frac{1}{2}$	$2\frac{1}{2}$
$\frac{3}{8}$	$\frac{3}{4}$	$1\frac{1}{4}$	2	3

**60° AND 22½° ELBOWS**

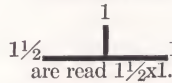
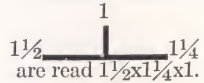
$\frac{1}{2}$	$1\frac{1}{4}$	$2\frac{1}{2}$	5
$\frac{3}{4}$	$1\frac{1}{2}$	3	6
1	2	4	..

**PITCHED ELBOWS**

$\frac{1}{2}$	$1\frac{1}{2}$ x 1	$3x2\frac{1}{2}$
$\frac{3}{4}$ x $\frac{1}{2}$	$1\frac{1}{2}$ x $1\frac{1}{4}$	3
$\frac{1}{2}$ x $\frac{3}{4}$	$1\frac{1}{2}$	$3\frac{1}{2}$ x 3
1	$2x1\frac{1}{2}$	$3\frac{1}{2}$
$1\frac{1}{4}$ x 1	2	4
$1\frac{1}{4}$	$2\frac{1}{2}$ x 2	.....
	$2\frac{1}{2}$	.....

**TEES**

Straight

Reducing on Outlet  
Described thus:Reducing on Run  
Described thus:

$\frac{1}{4}$ x $\frac{1}{4}$	$\frac{1}{4}$
$\frac{3}{8}$ x $\frac{3}{8}$	$\frac{3}{8}$
$\frac{3}{8}$ x $\frac{1}{2}$	$\frac{1}{2}$
$\frac{1}{2}$ x $\frac{1}{2}$	$\frac{1}{2}$
$\frac{1}{2}$ x $\frac{3}{8}$	$\frac{3}{8}$
$\frac{1}{2}$ x $\frac{1}{4}$	$\frac{1}{4}$
$\frac{3}{4}$ x $\frac{3}{4}$	$\frac{3}{4}$
$\frac{3}{4}$ x $\frac{1}{2}$	$\frac{1}{2}$
$\frac{3}{4}$ x $\frac{3}{8}$	$\frac{3}{8}$
$\frac{3}{4}$ x $\frac{1}{4}$	$\frac{1}{4}$
$1\frac{1}{2}$ x $1\frac{1}{2}$	$1\frac{1}{2}$
$1\frac{1}{2}$ x $\frac{3}{4}$	$\frac{3}{4}$
$1\frac{1}{2}$ x $\frac{1}{2}$	$\frac{1}{2}$
$1\frac{1}{2}$ x $\frac{3}{8}$	$\frac{3}{8}$
$1\frac{1}{2}$ x $\frac{1}{4}$	$\frac{1}{4}$
$1\frac{1}{2}$ x $\frac{3}{16}$	$\frac{3}{16}$
$1\frac{1}{2}$ x $\frac{1}{8}$	$\frac{1}{8}$
$1\frac{1}{2}$ x $\frac{1}{16}$	$\frac{1}{16}$
$1\frac{1}{2}$ x $\frac{1}{32}$	$\frac{1}{32}$
$1\frac{1}{2}$ x $\frac{1}{64}$	$\frac{1}{64}$
$1\frac{1}{2}$ x $\frac{1}{128}$	$\frac{1}{128}$
$1\frac{1}{2}$ x $\frac{1}{256}$	$\frac{1}{256}$
$1\frac{1}{2}$ x $\frac{1}{512}$	$\frac{1}{512}$
$1\frac{1}{2}$ x $\frac{1}{1024}$	$\frac{1}{1024}$
$1\frac{1}{2}$ x $\frac{1}{2048}$	$\frac{1}{2048}$
$1\frac{1}{2}$ x $\frac{1}{4096}$	$\frac{1}{4096}$
$1\frac{1}{2}$ x $\frac{1}{8192}$	$\frac{1}{8192}$
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$1\frac{1}{2}$ x $\frac{1}{131072}$	$\frac{1}{131072}$
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$1\frac{1}{2}$ x $\frac{1}{39614081257132168796771975168}$	$\frac{1}{39614081257132168796771975168}$
$1\frac{1}{2}$ x $\frac{1}{79228162514264337593543950336}$	$\frac{1}{79228162514264337593543950336}$
$1\frac{1}{2}$ x $\frac{1}{158456325028528675187087900672}$	$\frac{1}{158456325028528675187087900672}$
$1\frac{1}{2}$ x $\frac{1}{316912650057057350374175801344}$	$\frac{1}{316912650057057350374175801344}$
$1\frac{1}{2}$ x $\frac{1}{633825300114114700748351602688}$	$\frac{1}{633825300114114700748351602688}$
$1\frac{1}{2}$ x $\frac{1}{1267650600228229401496703205376}$	$\frac{1}{1267650600228229401496703205376}$
$1\frac{1}{2}$ x $\frac{1}{2535301200456458802993406410752}$	$\frac{1}{2535301200456458802993406410752}$
$1\frac{1}{2}$ x $\frac{1}{5070602400912917605986812821504}$	$\frac{1}{5070602400912917605986812821504}$
$1\frac{1}{2}$ x $\frac{1}{10141204801825835211973625643008}$	$\frac{1}{10141204801825835211973625643008}$
$1\frac{1}{2}$ x $\frac{1}{20282409603651670423947251286016}$	$\frac{1}{20282409603651670423947251286016}$
$1\frac{1}{2}$ x $\frac{1}{40564819207303340847894502572032}$	$\frac{1}{405648192073$

# STANDARD CAST IRON FLAT BAND SCREWED FITTINGS

## LIST OF SIZES—TEES

Continued

2 x2 x2	2 1/2 x2 x 1/2	3 1/2 x3 1/2 x3 1/2	4 x2 1/2 x4	5x3 x4	7x 5x 6
2 x2 x1 1/2	2 1/2 x1 1/2 x2 1/2	3 1/2 x3 1/2 x3	4 x2 1/2 x3 1/2	5x3 x3 1/2	7x 5x 5
2 x2 x1 1/4	2 1/2 x1 1/2 x2	3 1/2 x3 1/2 x2 1/2	4 x2 1/2 x3	5x3 x3	6x 6x 7
2 x2 x1	2 1/2 x1 1/2 x1 1/2	3 1/2 x3 1/2 x2	4 x2 1/2 x2 1/2	5x3 x2 1/2	5x 5x 7
2 x2 x 3/4	2 1/2 x1 1/2 x1 1/4	3 1/2 x3 1/2 x1 1/2	4 x2 1/2 x2	5x3 x2	8x 8x 8
2 x2 x 1/2	2 1/2 x1 1/2 x1	3 1/2 x3 1/2 x1 1/4	4 x2 1/2 x1 1/2	5x2 1/2 x5	8x 8x 7
2 x2 x 1/4	2 1/2 x1 1/4 x2 1/2	3 1/2 x3 1/2 x1	4 x2 1/2 x1 1/4	5x2 1/2 x4	8x 8x 6
2 x1 1/2 x2	2 1/2 x1 1/4 x2	3 1/2 x3 1/2 x 3/4	4 x2 1/2 x1	5x2 1/2 x3	8x 8x 5
2 x1 1/2 x1 1/2	2 1/2 x1 1/4 x1 1/2	3 1/2 x3 x3 1/2	4 x2 x4	5x2 x5	8x 8x 4
2 x1 1/2 x1 1/4	2 1/2 x1 x2 1/2	3 1/2 x3 x3	4 x2 x3	5x1 1/4 x5	8x 8x 3 1/2
2 x1 1/2 x1	2 1/2 x1 x2	3 1/2 x3 x2 1/2	4 x2 x2 1/2	4x4 x5	8x 8x 3
2 x1 1/2 x 3/4	2 1/2 x 3/4 x2 1/2	3 1/2 x3 x2	4 x2 x2	6x6 x6	8x 8x 2 1/2
2 x1 1/2 x 1/2	2 1/2 x 1/2 x2 1/2	3 1/2 x3 x1 1/2	4 x1 1/2 x4	6x6 x5	8x 8x 2
2 x1 1/4 x2	2 x2 x2 1/2	3 1/2 x3 x1 1/4	4 x1 1/4 x4	6x6 x4 1/2	8x 8x 1 1/2
2 x1 1/4 x1 1/2	2 x1 1/2 x2 1/2	3 1/2 x3 x1	4 x1 x4	6x6 x4	8x 8x 1 1/4
2 x1 1/4 x1 1/4	2 x1 1/4 x2 1/2	3 1/2 x3 x 3/4	3 1/2 x3 1/2 x4	6x6 x3 1/2	8x 7x 8
2 x1 1/4 x1	2 x1 x2 1/2	3 1/2 x2 1/2 x3 1/2	3 x3 x4	6x6 x3	8x 7x 6
2 x1 1/4 x 3/4	2 x 3/4 x2 1/2	3 1/2 x2 1/2 x3	2 1/2 x2 1/2 x4	6x6 x2 1/2	8x 7x 5
2 x1 x2	1 1/2 x1 1/4 x2 1/2	3 1/2 x2 1/2 x2 1/2	2 x2 x4	6x6 x2	8x 7x 4
2 x1 x1 1/2	1 1/2 x1 1/4 x2 1/2	3 1/2 x2 1/2 x2	4 1/2 x4 1/2 x4 1/2	6x6 x1 1/2	8x 7x 3
2 x1 x1 1/4	1 1/2 x1 x2 1/2	3 1/2 x2 x3 1/2	4 1/2 x4 1/2 x4	6x6 x1 1/4	8x 6x 8
2 x1 x1	3 x3 x3	3 1/2 x1 1/2 x3 1/2	4 1/2 x4 1/2 x3 1/2	6x6 x1	8x 6x 7
2 x1 x 3/4	3 x3 x2 1/2	3 1/2 x1 1/4 x3 1/2	4 1/2 x4 1/2 x3	6x5 x6	8x 6x 6
2 x 3/4 x2	3 x3 x2	3 1/2 x1 x3 1/2	4 1/2 x4 1/2 x2 1/2	6x5 x5	8x 5x 8
2 x 3/4 x1 1/2	3 x3 x1 1/2	3 x3 x3 1/2	4 1/2 x4 1/2 x2	6x5 x4	8x 5x 5
2 x 1/2 x1 1/2	3 x3 x1 1/4	4 x4 x4	4 1/2 x4 1/2 x1 1/2	6x5 x3 1/2	8x 4x 8
2 x 1/4 x2	3 x3 x1	4 x4 x3 1/2	4 1/2 x4 1/2 x1 1/4	6x5 x3	8x 4x 6
2 x 1/2 x2	3 x3 x 3/4	4 x4 x3	4 1/2 x4 1/2 x1	6x5 x2 1/2	6x 6x 8
1 1/2 x1 1/2 x2	3 x3 x 1/2	4 x4 x2 1/2	4 1/2 x4 x3	6x5 x1 1/2	9x 9x 9
1 1/2 x1 1/4 x2	3 x2 1/2 x3	4 x4 x2	5 x5 x5	6x4 x6	9x 9x 7
1 1/2 x1 x2	3 x2 1/2 x2 1/2	4 x4 x1 1/2	5 x5 x4 1/2	6x4 x4	9x 9x 6
1 1/2 x 3/4 x2	3 x2 1/2 x2	4 x4 x1 1/4	5 x5 x4	6x4 x3	9x 9x 5
1 1/4 x1 1/4 x2	3 x2 1/2 x1 1/2	4 x4 x1	5 x5 x3 1/2	6x3 x6	10x10x10
1 1/4 x1 x2	3 x2 1/2 x1 1/4	4 x4 x 3/4	5 x5 x3	6x2 1/2 x6	10x10x 8
1 1/4 x 3/4 x2	3 x2 1/2 x1	4 x3 1/2 x4	5 x5 x2 1/2	6x2 x6	10x10x 6
1 x1 x2	3 x2 1/2 x 3/4	4 x3 1/2 x3 1/2	5 x5 x2	5x5 x6	10x10x 5
1 x 3/4 x2	3 x2 x3	4 x3 1/2 x3	5 x5 x1 1/2	5x3 1/2 x6	10x10x 4
2 1/2 x2 1/2 x2 1/2	3 x2 x2 1/2	4 x3 1/2 x2 1/2	5 x5 x1 1/4	4x4 x6	10x10x 3
2 1/2 x2 1/2 x2	3 x2 x2	4 x3 1/2 x2	5 x5 x1	7x7 x7	10x10x 2
2 1/2 x2 1/2 x1 1/2	3 x2 x1 1/2	4 x3 1/2 x1 1/2	5 x5 x 3/4	7x7 x6	10x 8x 8
2 1/2 x2 1/2 x1 1/4	3 x2 x1 1/4	4 x3 1/2 x1 1/4	5 x4 x5	7x7 x5	8x 8x10
2 1/2 x2 1/2 x1	3 x2 x1	4 x3 1/2 x1	5 x4 x4 1/2	7x7 x4	12x12x12
2 1/2 x2 1/2 x 3/4	3 x1 1/2 x3	4 x3 x4	5 x4 x4	7x7 x3 1/2	12x12x10
2 1/2 x2 1/2 x 1/2	3 x1 1/2 x2 1/2	4 x3 x3 1/2	5 x4 x3 1/2	7x7 x3	12x12x 8
2 1/2 x2 1/2 x 1/4	3 x1 1/2 x2	4 x3 x3	5 x4 x3	7x7 x2 1/2	12x12x 6
2 1/2 x2 x2 1/2	3 x1 1/4 x3	4 x3 x2 1/2	5 x4 x2 1/2	7x7 x2	12x12x 5
2 1/2 x2 x2	3 x1 x3	4 x3 x2	5 x4 x2	7x6 x7	12x12x 4
2 1/2 x2 x1 1/2	2 1/2 x2 1/2 x3	4 x3 x1 1/2	5 x4 x1 1/2	7x6 x6	12x 8x10
2 1/2 x2 x1 1/4	2 1/2 x2 x3	4 x3 x1 1/4	5 x3 1/2 x3 1/2	7x6 x5	12x 8x 8
2 1/2 x2 x1	2 1/2 x1 1/2 x3	4 x3 x1	5 x3 x5	7x6 x4	.....
2 1/2 x2 x 3/4	2 x2 x3	4 x3 x 3/4	5 x3 x4 1/2	7x6 x3	.....

# STANDARD CAST IRON FLAT BAND SCREWED FITTINGS

## LIST OF SIZES

### STRAIGHT CROSSES



1/2x	1/2x	1/2x	1/2
3/4x	3/4x	3/4x	3/4
3/4x	3/4x	1/2x	1/2
3/4x	1/2x	1/2x	1/2
1	x1	x1	x1
1	x1	x	3/4x 3/4
1	x1	x	1/2x 1/2
1	x	3/4x	3/4x 3/4
1 1/4x1 1/4x1 1/4x1 1/4			
1 1/4x1 1/4x1 x1			
1 1/4x1 1/4x 3/4x 3/4			
1 1/4x1 1/4x 1/2x 1/2			
1 1/4x1 x1 x1			
1 1/4x1 x 3/4x 3/4			
1 1/4x 3/4x 3/4x 3/4			
1 1/2x1 1/2x1 1/2x1 1/2			
1 1/2x1 1/2x1 1/4x1 1/4			
1 1/2x1 1/4x1 x1			
1 1/2x1 1/2x 3/4x 3/4			
1 1/2x1 1/2x 1/2x 1/2			
1 1/2x1 1/4x1 1/4x1 1/4			
1 1/2x1 1/4x1 x1			
1 1/2x1 1/4x 3/4x 3/4			
1 1/2x1 x1 x 3/4			
1 1/2x1 x1 x 1/2			
1 1/2x1 x 3/4x 3/4			
2	x2	x2	
2	x2	x1 1/2x1 1/2	
2	x2	x1 1/4x1 1/4	
2	x2	x1 1/4x1	
2	x2	x1 x1	
2	x2	x1 x 3/4	
2	x2	x 3/4x 3/4	
2	x2	x 1/2x 1/2	
2	x1 1/2x1 1/2x1 1/2		
2	x1 1/2x1 1/4x1 1/4		
2	x1 1/2x1 1/4x1		
2	x1 1/2x1 x1		
2	x1 1/2x1 x 3/4		
2	x1 1/2x 3/4x 3/4		
2	x1 1/4x1 x 3/4		
2	x1 x1 1/2x1		
2 1/2x2 1/2x2 1/2x2 1/2			
2 1/2x2 1/2x2 x2			
2 1/2x2 1/2x1 1/2x1 1/2			
2 1/2x2 1/2x1 1/2x1 1/4			
2 1/2x2 1/2x1 1/2x1			
2 1/2x2 1/2x1 1/4x1 1/4			
2 1/2x2 1/2x1 1/4x1			
2 1/2x2 1/2x1 1/4x 3/4			

### REDUCING



2 1/2x2 1/2x1 x1	
2 1/2x2 1/2x1 x 3/4	
2 1/2x2 1/2x 3/4x 3/4	
2 1/2x2 x2 x1 1/2	
2 1/2x2 x2 x1 1/4	
2 1/2x2 x2 x1	
2 1/2x2 x1 1/2x1 1/2	
2 1/2x2 x1 1/2x1 1/4	
2 1/2x2 x1 1/2x1	
2 1/2x2 x1 1/2x 3/4	
2 1/2x2 x1 1/4x1 1/4	
2 1/2x2 x1 1/4x1	
2 1/2x2 x1 x1	
2 1/2x2 x1 x 3/4	
2 1/2x2 x1 x 3/4x 3/4	
2 1/2x1 1/2x2 x1 1/2	
2 1/2x1 1/2x1 1/2x1 1/4	
3 x3 x3 x3	
3 x3 x2 1/2x2 1/2	
3 x3 x2 x2	
3 x3 x2 x1 1/2	
3 x3 x2 x1	
3 x3 x1 1/2x1 1/2	
3 x3 x1 1/2x1 1/4	
3 x3 x1 1/2x1	
3 x3 x1 1/2x 3/4	
3 x3 x1 x1	
3 x3 x 3/4x 3/4	
3 x2 1/2x2 1/2x2	
3 x2 1/2x2 1/2x1 1/2	
3 x2 1/2x2 x2	
3 x2 1/2x2 x1 1/2	
3 x2 1/2x2 x1 1/4	
3 x2 1/2x2 x1	
3 x2 1/2x2 x 3/4	
3 x2 1/2x1 1/2x1 1/2	
3 x2 1/2x1 1/2x1 1/4	
3 x2 1/2x1 1/4x1 1/4	
3 x2 1/2x1 x1	
3 x2 x2 x2	
3 1/2x3 1/2x3 1/2x3 1/2	
3 1/2x3 1/2x3 x3	
3 1/2x3 1/2x2 1/2x2 1/2	
3 1/2x3 1/2x2 x2	

### CROSSES

#### Continued

3 1/2x3 1/2x2 x1 1/2	5x 5x 3 x 3
3 1/2x3 1/2x1 1/2x1 1/2	5x 5x 2 1/2x 2 1/2
3 1/2x3 1/2x1 1/2x1 1/4	5x 5x 2 x 2
3 1/2x3 1/2x1 1/2x1	5x 5x 2 x 1 1/2
3 1/2x3 1/2x1 1/4x1 1/4	5x 5x 1 1/2x 1 1/2
3 1/2x3 1/2x1 1/4x1	5x 5x 1 1/2x 1 1/4
3 1/2x3 1/2x1 x1	5x 5x 1 x 1
3 1/2x3 x2 1/2x2	5x 4x 2 x 2
3 1/2x3 x2 x2	5x 4x 2 x 1 1/2
3 1/2x3 x2 x1 1/2	5x 4x 1 1/2x 1 1/2
3 1/2x3 x2 x1 1/4	5x 4x 1 1/2x 1 1/4
3 1/2x3 x1 1/2x1 1/2	5x 4x 1 1/4x 1
3 1/2x3 x1 1/2x1 1/4	5x 4x 1 x 1
3 1/2x3 x1 1/2x1	6x 6x 6 x 6
3 1/2x3 x1 1/4x1 1/4	6x 6x 5 x 5
3 1/2x3 x1 1/4x1	6x 6x 4 x 4
3 1/2x3 x1 x1	6x 6x 3 x 3
4 x4 x4	6x 6x 2 1/2x 2 1/2
4 x4 x3 1/2x3 1/2	6x 6x 2 x 2
4 x4 x3 x3	6x 6x 2 x 1 1/2
4 x4 x2 1/2x2 1/2	6x 6x 1 1/2x 1 1/2
4 x4 x2 x2	6x 5x 2 x 2
4 x4 x2 x1 1/2	6x 5x 2 x 1 1/2
4 x4 x1 1/2x1 1/2	6x 5x 1 1/2x 1 1/2
4 x4 x1 1/2x1 1/4	7x 7x 7 x 7
4 x4 x1 1/2x1	7x 7x 6 x 6
4 x4 x1 1/4x1 1/4	7x 7x 5 x 5
4 x4 x1 1/4x1	8x 8x 8 x 8
4 x4 x1 x1	8x 8x 7 x 7
4 x3 1/2x2 1/2x2	8x 8x 6 x 6
4 x3 1/2x2 x2	8x 8x 5 x 5
4 x3 1/2x2 x1 1/2	8x 8x 4 x 4
4 x3 1/2x2 x1 1/4	9x 9x 9 x 9
4 x3 1/2x1 1/2x1 1/2	10x10x10 x10
4 x3 1/2x1 1/2x1 1/4	10x10x 8 x 8
4 x3 1/2x1 1/4x1 1/4	10x10x 7 x 7
4 x3 1/2x1 1/4x1	12x12x12 x12
4 1/2x4 1/2x4 1/2x4 1/2	12x12x10 x10
5 x5 x5 x5	12x12x 8 x 8
5 x5 x4 x4	

### STANDARD REDUCERS



4 1/2x4	5x2 1/2	6x3	8x 6
5 x4 1/2	5x2	6x2 1/2	8x 4
5 x4	6x5	6x2	10x 8
5 x3 1/2	6x4	7x6	10x 6
5 x3	6x3 1/2	8x7	12x10

### ECCENTRIC REDUCERS

1 1/4x 3/4	2 1/2x2	4 x3	6x3
1 1/4x1	3 x1 1/2	4 x3 1/2	6x3 1/2
1 1/2x1	3 x2	4 1/2x4	6x4
1 1/2x1 1/4	3 x2 1/2	5 x2	6x5
2 x 3/4	3 1/2x1 1/4	5 x2 1/2	7x6
2 x1	3 1/2x2	5 x3	8x5
2 x1 1/4	3 1/2x2 1/2	5 x3 1/2	8x6
2 x1 1/2	3 1/2x3	5 x4	8x7
2 1/2 x1 1/4	4 x2	5 x4 1/2	....
2 1/2 x1 1/2	4 x2 1/2	6 x2 1/2	....



# CAST IRON FITTINGS

## LIST OF SIZES

## CAST IRON BUSHINGS



$\frac{3}{8} \times \frac{1}{8}$	$2\frac{1}{2} \times 1$	$4\frac{1}{2} \times 2\frac{1}{2}$	$7 \times 4\frac{1}{2}$
$\frac{1}{2} \times \frac{1}{4}$	$2\frac{1}{2} \times 1\frac{1}{4}$	$4\frac{1}{2} \times 3$	$7 \times 5$
$\frac{3}{4} \times \frac{1}{4}$	$2\frac{1}{2} \times 1\frac{1}{2}$	$4\frac{1}{2} \times 3\frac{1}{2}$	$7 \times 6$
$\frac{3}{4} \times \frac{3}{8}$	$3 \times \frac{1}{2}$	$4\frac{1}{2} \times 4$	$8 \times 2$
$1 \times \frac{1}{4}$	$3 \times \frac{3}{4}$	$5 \times 1$	$8 \times 2\frac{1}{2}$
$1 \times \frac{3}{8}$	$3 \times 1$	$5 \times 2$	$8 \times 3$
$1 \times \frac{1}{2}$	$3 \times 1\frac{1}{4}$	$5 \times 2\frac{1}{2}$	$8 \times 4$
$1\frac{1}{4} \times \frac{1}{4}$	$3 \times 1\frac{1}{2}$	$5 \times 3$	$8 \times 5$
$1\frac{1}{4} \times \frac{3}{8}$	$3 \times 2$	$5 \times 3\frac{1}{2}$	$8 \times 6$
$1\frac{1}{4} \times \frac{1}{2}$	$3 \times 2\frac{1}{2}$	$5 \times 4$	$8 \times 7$
$1\frac{1}{4} \times \frac{3}{4}$	$3\frac{1}{2} \times 1$	$5 \times 4\frac{1}{2}$	$9 \times 6$
$1\frac{1}{2} \times \frac{1}{4}$	$3\frac{1}{2} \times 1\frac{1}{4}$	$6 \times 1\frac{1}{2}$	$9 \times 7$
$1\frac{1}{2} \times \frac{3}{8}$	$3\frac{1}{2} \times 1\frac{1}{2}$	$6 \times 2$	$9 \times 8$
$1\frac{1}{2} \times \frac{1}{2}$	$3\frac{1}{2} \times 2$	$6 \times 2\frac{1}{2}$	$10 \times 4$
$1\frac{1}{2} \times \frac{3}{4}$	$3\frac{1}{2} \times 2\frac{1}{2}$	$6 \times 3$	$10 \times 5$
$1\frac{1}{2} \times 1$	$3\frac{1}{2} \times 3$	$6 \times 3\frac{1}{2}$	$10 \times 6$
$2 \times \frac{1}{4}$	$4 \times 1$	$6 \times 4$	$10 \times 7$
$2 \times \frac{3}{8}$	$4 \times 1\frac{1}{4}$	$6 \times 4\frac{1}{2}$	$10 \times 8$
$2 \times \frac{1}{2}$	$4 \times 1\frac{1}{2}$	$6 \times 5$	$10 \times 9$
$2 \times \frac{3}{4}$	$4 \times 2$	$7 \times 2$	$12 \times 6$
$2 \times 1$	$4 \times 2\frac{1}{2}$	$7 \times 2\frac{1}{2}$	$12 \times 8$
$2 \times 1\frac{1}{4}$	$4 \times 3$	$7 \times 3$	$12 \times 10$
$2\frac{1}{2} \times \frac{1}{2}$	$4 \times 3\frac{1}{2}$	$7 \times 3\frac{1}{2}$	.....
$2\frac{1}{2} \times \frac{3}{4}$	$4\frac{1}{2} \times 2$	$7 \times 4$	.....

## MALLEABLE BUSHINGS

$\frac{1}{4} \times \frac{1}{8}$	$\frac{3}{4} \times \frac{1}{2}$	$1\frac{1}{2} \times 1\frac{1}{4}$
$\frac{3}{8} \times \frac{1}{4}$	$1 \times \frac{3}{4}$	$2 \times 1\frac{1}{2}$
$\frac{1}{2} \times \frac{3}{8}$	$1\frac{1}{4} \times 1$	$2\frac{1}{2} \times 2$

## FACED BUSHINGS

$\frac{3}{8} \times \frac{1}{4}$	$2 \times \frac{3}{4}$	$3\frac{1}{2} \times 2\frac{1}{2}$	$*6 \times 4$
$\frac{1}{2} \times \frac{3}{8}$	$2 \times 1$	$3\frac{1}{2} \times 3$	$*6 \times 5$
$\frac{3}{4} \times \frac{3}{8}$	$2 \times 1\frac{1}{4}$	$*4 \times 2$	$7 \times 5$
$\frac{3}{4} \times \frac{1}{2}$	$2 \times 1\frac{1}{2}$	$4 \times 2\frac{1}{2}$	$7 \times 6$
$1 \times \frac{1}{2}$	$2\frac{1}{2} \times 1\frac{1}{4}$	$4 \times 3$	$8 \times 6$
$1 \times \frac{3}{4}$	$2\frac{1}{2} \times 1\frac{1}{2}$	$4 \times 3\frac{1}{2}$	$8 \times 7$
$1\frac{1}{4} \times \frac{3}{4}$	$2\frac{1}{2} \times 2$	$4\frac{1}{2} \times 4$	$10 \times 8$
$1\frac{1}{4} \times 1$	$3 \times 1\frac{1}{2}$	$*5 \times 3$	$12 \times 10$
$1\frac{1}{2} \times \frac{3}{4}$	$3 \times 2$	$5 \times 4$	.....
$1\frac{1}{2} \times 1$	$3 \times 2\frac{1}{2}$	$5 \times 4\frac{1}{2}$	.....
$1\frac{1}{2} \times 1\frac{1}{4}$	$3\frac{1}{2} \times 2$	$6 \times 3$	.....

\*Cast iron. Others malleable iron.

## Y BENDS

 $\frac{1}{2}$  to 12 inches.

## PLUGS

 $\frac{1}{8}$  to 12 inches.

## LOCKNUTS

 $2\frac{1}{2}$  to 12 inches.

LONG SWEEP ELBOWS		CAPS	
$1\frac{1}{4}$	$2\frac{1}{2}$	$4\frac{1}{2}$	8
$1\frac{1}{2}$	3	5	9
$2$	$3\frac{1}{2}$	6	10
	4	7	12

## No. 2 LONG SWEEP DOUBLE BRANCH ELBOWS

$1 \times 1 \times 1$	$1\frac{1}{2} \times 1\frac{1}{2} \times 2$	$3\frac{1}{2} \times 3\frac{1}{2} \times 3\frac{1}{2}$	$6 \times 6 \times 6$
$1\frac{1}{4} \times 1\frac{1}{4} \times 1\frac{1}{4}$	$2\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{2}$	$4 \times 4 \times 4$	$7 \times 7 \times 7$
$1 \times 1 \times 1\frac{1}{4}$	$2 \times 2 \times 2\frac{1}{2}$	$3 \times 3 \times 4$	$8 \times 8 \times 8$
$1\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	$3 \times 3 \times 3$	$2\frac{1}{2} \times 2\frac{1}{2} \times 4$	$9 \times 9 \times 9$
$1\frac{1}{4} \times 1\frac{1}{4} \times 1\frac{1}{2}$	$2 \times 2 \times 3$	$4\frac{1}{2} \times 4\frac{1}{2} \times 4\frac{1}{2}$	$10 \times 10 \times 10$
$2 \times 2 \times 2$	$2\frac{1}{2} \times 2\frac{1}{2} \times 3$	$5 \times 5 \times 5$	$12 \times 12 \times 12$

## No. 3 LONG SWEEP TEES

$1 \times 1 \times 1$	$2\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{2}$	$4 \times 4 \times 3$
$1\frac{1}{4} \times 1\frac{1}{4} \times 1\frac{1}{4}$	$2\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{4}$	$4 \times 4 \times 2\frac{1}{2}$
$1\frac{1}{4} \times 1\frac{1}{4} \times 1$	$2\frac{1}{2} \times 2 \times 2$	$4 \times 4 \times 2$
$1\frac{1}{2} \times 1 \times 1$	$2\frac{1}{2} \times 2 \times 1\frac{1}{2}$	$4 \times 4 \times 1\frac{1}{2}$
$1\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	$3 \times 3 \times 3$	$4 \times 3 \times 3$
$1\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{4}$	$3 \times 3 \times 2\frac{1}{2}$	$4\frac{1}{2} \times 4\frac{1}{2} \times 4\frac{1}{2}$
$1\frac{1}{2} \times 1\frac{1}{2} \times 1$	$3 \times 3 \times 2$	$5 \times 5 \times 5$
$1\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{4}$	$3 \times 3 \times 1\frac{1}{2}$	$5 \times 5 \times 3$
$1\frac{1}{2} \times 1\frac{1}{2} \times 1$	$3 \times 3 \times 1\frac{1}{4}$	$5 \times 5 \times 2$
$2 \times 2 \times 2$	$3 \times 2\frac{1}{2} \times 2$	$6 \times 6 \times 6$
$2 \times 2 \times 1\frac{1}{2}$	$3\frac{1}{2} \times 3\frac{1}{2} \times 3\frac{1}{2}$	$6 \times 6 \times 2$
$2 \times 2 \times 1\frac{1}{4}$	$3\frac{1}{2} \times 3\frac{1}{2} \times 2$	$7 \times 7 \times 7$
$2 \times 2 \times 1$	$3\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{2}$	$8 \times 8 \times 8$
$2 \times 1\frac{1}{2} \times 1\frac{1}{2}$	$3\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{4}$	$9 \times 9 \times 9$
$2\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{2}$	$3\frac{1}{2} \times 3 \times 2$	$10 \times 10 \times 10$
$2\frac{1}{2} \times 2\frac{1}{2} \times 2$	$4 \times 4 \times 4$	$12 \times 12 \times 12$

## No. 4 LONG SWEEP CROSSES

$1 \times 1 \times 1 \times 1$	$3\frac{1}{2} \times 3\frac{1}{2} \times 3\frac{1}{2} \times 3\frac{1}{2}$	$7 \times 7 \times 7 \times 7$
$1\frac{1}{4} \times 1\frac{1}{4} \times 1\frac{1}{4} \times 1\frac{1}{4}$	$4 \times 4 \times 4 \times 4$	$8 \times 8 \times 8 \times 8$
$1\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	$4 \times 4 \times 2\frac{1}{2} \times 2\frac{1}{2}$	$8 \times 8 \times 6 \times 6$
$2 \times 2 \times 2 \times 2$	$5 \times 5 \times 5 \times 5$	$8 \times 8 \times 4 \times 4$
$2\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{2}$	$5 \times 5 \times 4 \times 4$	$9 \times 9 \times 9 \times 9$
$2\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	$5 \times 5 \times 3 \times 3$	$10 \times 10 \times 10 \times 10$
$3 \times 3 \times 3 \times 3$	$6 \times 6 \times 6 \times 6$	$12 \times 12 \times 12 \times 12$
$3 \times 3 \times 1\frac{1}{2} \times 1\frac{1}{2}$	$6 \times 6 \times 4 \times 4$	.....

## No. 12 LONG SWEEP STRAIGHT BACK TEES

$1 \times 1 \times 1$	$3 \times 3 \times 3$	$3\frac{1}{2} \times 3 \times 4$	$4 \times 4 \times 6$
$1\frac{1}{4} \times 1\frac{1}{4} \times 1\frac{1}{4}$	$3 \times 3 \times 1\frac{1}{2}$	$3 \times 3 \times 4$	$7 \times 7 \times 7$
$1\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$	$3 \times 3 \times 1$	$4\frac{1}{2} \times 4\frac{1}{2} \times 4\frac{1}{2}$	$8 \times 8 \times 8$
$2 \times 2 \times 2$	$3 \times 2\frac{1}{2} \times 2\frac{1}{2}$	$5 \times 5 \times 5$	$8 \times 8 \times 6$
$2 \times 2 \times 1$	$3 \times 2\frac{1}{2} \times 2$	$5 \times 5 \times 3$	$8 \times 8 \times 4$
$2 \times 1\frac{1}{2} \times 1\frac{1}{2}$	$2\frac{1}{2} \times 2\frac{1}{2} \times 3$	$4 \times 4 \times 5$	$9 \times 9 \times 9$
$2 \times 1\frac{1}{2} \times 1$	$3\frac{1}{2} \times 3\frac{1}{2} \times 3\frac{1}{2}$	$4 \times 3\frac{1}{2} \times 5$	$10 \times 10 \times 10$
$2\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{2}$	$3\frac{1}{2} \times 3 \times 2$	$6 \times 6 \times 6$	$12 \times 12 \times 12$
$2\frac{1}{2} \times 2\frac{1}{2} \times 2$	$4 \times 4 \times 4$	$6 \times 6 \times 4$	.....
$2\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{2}$	$4 \times 4 \times 2\frac{1}{2}$	$5 \times 4 \times 6$	.....

# STANDARD CAST IRON FLAT BAND SCREWED FITTINGS

## STRAIGHT ELBOWS



Fig. 8473A

Size In.	PRICE, EACH Black	Galv.	Size In.	PRICE, EACH Black	Galv.
1/4	.05	.10	3 1/2	1.05	2.10
3/8	.05	.10	4	1.20	2.40
1/2	.06	.12	4 1/2	1.75	3.50
3/4	.08	.16	5	2.00	4.00
1	.10 1/2	.21	6	2.75	5.50
1 1/4	.16	.32	7	4.70	9.40
1 1/2	.20	.40	8	6.75	13.50
2	.28	.56	9	9.00	18.00
2 1/2	.50	1.00	10	13.50	27.00
3	.75	1.50	12	20.00	40.00

## REDUCING ELBOWS



Fig. 8473B

Size In.	PRICE, EACH	Size In.	PRICE, EACH
1/4	.06	3 1/2	1.20
3/8	.07	4	1.40
1/2	.09	4 1/2	2.00
3/4	.12	5	2.30
1	.18	6	3.15
1 1/4	.23	7	5.40
1 1/2	.32	8	7.75
2	.60	9	10.50
2 1/2	.85	10	15.50
3		12	23.00

## PITCHED ELBOWS

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
3/4	.10	1 1/2	.25	3	1.00
1	.13	2	.35	3 1/2	1.30
1 1/4	.20	2 1/2	.65	4	1.50

## RIGHT AND LEFT ELBOWS



Fig. 8473C

Size In.	Price Each	Size In.	Price Each
1/4	.06	1 1/4	.18
3/8	.06	1 1/2	.23
1/2	.07	2	.32
3/4	.09	2 1/2	.60
1	.12	3	.85

## 45° ELBOWS



Fig. 8473D

Size In.	PRICE, EACH Black	Galv.	Size In.	PRICE, EACH Black	Galv.
1/4	.06	.12	3 1/2	1.25	2.50
3/8	.06	.12	4	1.45	2.90
1/2	.07	.14	4 1/2	2.20	4.40
3/4	.10	.20	5	2.50	5.00
1	.12	.24	6	3.45	6.90
1 1/4	.19	.38	7	5.90	11.80
1 1/2	.24	.48	8	8.50	17.00
2	.34	.68	9	11.25	22.50
2 1/2	.60	1.20	10	17.00	34.00
3	.90	1.80	12	25.00	50.00

## 60° AND 22 1/2° ELBOWS



Fig. 8473E

Size In.	PRICE, EACH 60°	22 1/2°	Size In.	PRICE, EACH 60°	22 1/2°
1/2	.25	.25	2 1/2	1.10	1.10
3/4	.30	.30	3	1.65	1.65
1	.35	.35	4	2.75	2.75
1 1/4	.45	.45	5	5.00	5.00
1 1/2	.50	.50	6	7.00	7.00
2	.60	.60	...	...	...

## MEDIUM REDUCING DOUBLE BRANCH ELBOWS



Fig. 8473F

Size, In.	Price Each	Size, In.	Price Each
1 x1 x1 1/4	.75	2 1/2 x2 1/2 x3	4.25
1 1/4 x1 1/4 x1 1/2	1.05	3 x3 x4	6.50
1 1/2 x1 1/2 x2	1.50	4 x4 x5	12.00
2 x2 x2 1/2	2.25	5 x5 x6	16.50

In describing medium reducing, double branch elbows, the run is first named, then the outlet.

## STANDARD CAST IRON FLAT BAND SCREWED FITTINGS

### STRAIGHT TEES



Fig. 8475A

Size In.	PRICE, EACH Black Galv.	Size In.	PRICE, EACH Black Galv.
$\frac{1}{4}$	.08 .16	$3\frac{1}{2}$	1.50 3.00
$\frac{3}{8}$	.08 .16	4	1.75 3.50
$\frac{1}{2}$	.09 .18	$4\frac{1}{2}$	2.55 5.10
$\frac{3}{4}$	.12 .24	5	3.00 6.00
1	.15 .30	6	4.00 8.00
$1\frac{1}{4}$	.23 .46	7	6.80 13.60
$1\frac{1}{2}$	.29 .58	8	9.75 19.50
2	.41 .82	9	13.00 26.00
$2\frac{1}{2}$	.73 1.46	10	19.50 39.00
3	1.10 2.20	12	29.00 58.00

### REDUCING TEES

On Run



Fig. 8475B

On Outlet



Fig. 8475C

Tees reducing on the run are described thus:

$1\frac{1}{2}$  —  $\frac{1}{2}$  —  $1\frac{1}{4}$   
and are read  $1\frac{1}{2} \times 1\frac{1}{4}$ .

Tees reducing on the outlet are described thus:

$1\frac{1}{2}$  —  $\frac{1}{2}$  —  $1\frac{1}{2}$   
and read  $1\frac{1}{2} \times 1$ .

Size In.	PRICE, EACH Black Galv.	Size In.	PRICE, EACH Black Galv.
$\frac{3}{8}$	.09 .18	4	2.00 4.00
$\frac{1}{2}$	.10 .20	$4\frac{1}{2}$	2.95 5.90
$\frac{3}{4}$	.14 .28	5	3.50 7.00
1	.17 .34	6	4.60 9.20
$1\frac{1}{4}$	.27 .54	7	7.80 15.60
$1\frac{1}{2}$	.33 .66	8	11.25 22.50
2	.47 .94	9	15.00 30.00
$2\frac{1}{2}$	.83 1.66	10	22.50 45.00
3	1.25 2.50	12	33.50 67.00
$3\frac{1}{2}$	1.75 3.50	...	.....

### CROSSES

Straight

Reducing



Fig. 8475D



Fig. 8475E

### STRAIGHT CROSSES

Size In.	PRICE, EACH Black Galv.	Size In.	PRICE, EACH Black Galv.
$\frac{1}{2}$	.16 .32	4	3.15 6.30
$\frac{3}{4}$	.22 .44	$4\frac{1}{2}$	4.60 9.20
1	.27 .54	5	5.50 11.00
$1\frac{1}{4}$	.42 .84	6	7.25 14.50
$1\frac{1}{2}$	.53 1.06	7	12.25 24.50
2	.75 1.50	8	17.50 35.00
$2\frac{1}{2}$	1.30 2.60	9	23.50 47.00
3	2.00 4.00	10	35.00 70.00
$3\frac{1}{2}$	2.70 5.40	12	52.50 105.00

### REDUCING CROSSES

Size In.	PRICE, EACH Black Galv.	Size In.	PRICE, EACH Black Galv.
$\frac{1}{2}$	.18 .36	4	3.50 7.00
$\frac{3}{4}$	.25 .50	$4\frac{1}{2}$	5.10 10.20
1	.30 .60	5	6.00 12.00
$1\frac{1}{4}$	.46 .92	6	8.00 16.00
$1\frac{1}{2}$	.60 1.20	7	13.50 27.00
2	.83 1.66	8	19.25 38.50
$2\frac{1}{2}$	1.45 2.90	9	26.00 52.00
3	2.20 4.40	10	38.50 77.00
$3\frac{1}{2}$	3.00 6.00	12	58.00 116.00

### Y BRANCHES



Fig. 8475F

Size In.	PRICE, EACH Black Galv.	Size In.	PRICE, EACH Black Galv.
$\frac{1}{2}$	.20 .40	4	4.00 8.00
$\frac{3}{4}$	.28 .56	$4\frac{1}{2}$	5.90 11.80
1	.34 .68	5	7.00 14.00
$1\frac{1}{4}$	.54 1.08	6	9.20 18.40
$1\frac{1}{2}$	.66 1.32	7	15.60 31.20
2	.94 1.88	8	22.50 45.00
$2\frac{1}{2}$	1.66 3.32	10	45.00 90.00
3	2.50 5.00	12	67.00 134.00
$3\frac{1}{2}$	3.50 7.00	...	.....



## STANDARD CAST IRON FLAT BAND SCREWED FITTINGS

### CLOSE PATTERN RETURN BENDS



Fig. 8481A

Close pattern return bends will not make up parallel coils as the distance center to center of two adjacent bends is greater than the center to center of openings of a single bend.

Size In.	C. to C. In.	PRICE, EACH		
		R. H. Blk.	R. H. Galv.	R. and L. Blk.
$\frac{1}{2}$	$1\frac{1}{4}$	.18	.36	.21
$\frac{3}{4}$	$1\frac{1}{2}$	.20	.40	.23
1	$1\frac{3}{4}$	.22	.44	.26
$1\frac{1}{4}$	$2\frac{1}{4}$	.28	.56	.33
$1\frac{1}{2}$	$2\frac{1}{2}$	.40	.80	.46
2	$3\frac{1}{4}$	.57	1.14	.66
$2\frac{1}{2}$	$3\frac{3}{8}$	1.20	2.40	1.40
3	$4\frac{3}{8}$	1.70	3.40	1.95
4	6	5.00	10.00	5.25

### CLOSE PATTERN PITCHED RETURN BENDS

Size In.	C. to C. In.	PRICE, EACH	
		R. H. Blk.	R. and L. Blk.
$\frac{3}{4}$	$1\frac{1}{2}$	.23	.23
1	$1\frac{3}{4}$	.26	.26
$1\frac{1}{4}$	$2\frac{1}{4}$	.33	.33

Right and left and left hand return bends are made to order.

### OPEN PATTERN RETURN BENDS



Fig. 8481B

Size In.	C. to C. In.	PRICE, EACH			
		R. H. Blk.	R. H. Galv.	R. and L. Blk.	L. H. Blk.
$\frac{3}{4}$	$1\frac{7}{8}$	.26	.52	.30	.30
1	$2\frac{1}{2}$	.30	.60	.35	.35
$1\frac{1}{4}$	3	.40	.80	.46	.46
$1\frac{1}{2}$	$3\frac{1}{2}$	.55	1.10	.64	.64
2	$4\frac{1}{2}$	.80	1.60	.92	.92
$2\frac{1}{2}$	$5\frac{3}{8}$	1.35	2.70	1.55	1.55
3	$6\frac{1}{2}$	2.20	4.40	2.50	2.50
4	7	6.50	10.00	7.00	7.00

### WIDE PATTERN RETURN BENDS



Fig. 8481C

Size Inches	C. to C. In.	PRICE, EACH	
		Black	Galv.
1	3	.45	.80
1	4	.50	.90
1	5	.60	1.10
1	6	.75	1.30
1	8	1.00	1.60
1	9	1.25	1.85
$1\frac{1}{4}$	4	1.00	1.75
$1\frac{1}{4}$	6	1.25	2.00
$1\frac{1}{2}$	$4\frac{7}{8}$	1.30	2.30
$1\frac{1}{2}$	6	1.60	2.60
$1\frac{1}{2}$	8	2.00	3.25
2	$4\frac{7}{8}$	1.75	3.00
2	6	2.00	3.25
2	7	3.00	4.50
2	8	3.50	5.00
2	12	4.50	7.00
4	11	7.50	11.00

### CAPS



Fig. 8481D

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
$2\frac{1}{2}$	.40	.80	6	1.55	3.10
3	.54	1.08	7	2.50	5.00
$3\frac{1}{2}$	.75	1.50	8	2.85	5.70
4	.87	1.74	9	4.75	9.50
$4\frac{1}{2}$	1.05	2.10	10	5.50	11.00
5	1.20	2.40	12	7.00	14.00

### LOCKNUTS



Fig. 8481E

Size	PRICE, EACH		Size	PRICE, EACH	
	Black	Galv.		Black	Galv.
2	.25	.50	6	1.30	2.60
$2\frac{1}{2}$	.27	.54	7	1.70	3.40
3	.34	.68	8	2.35	4.70
$3\frac{1}{2}$	.47	.94	9	2.70	5.40
4	.64	1.28	10	3.00	6.00
$4\frac{1}{2}$	.85	1.70	12	4.00	8.00
5	.90	1.80	..	....	....

# STANDARD CAST IRON FLAT BAND SCREWED FITTINGS

## REDUCERS



Fig. 8480A

## Eccentric



Fig. 8480B

## BLACK STANDARD REDUCERS

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
$\frac{3}{8}$	.06	$2\frac{1}{2}$	.60	7	5.35
$\frac{1}{2}$	.09	3	.80	8	6.75
$\frac{3}{4}$	.10	$3\frac{1}{2}$	1.00	9	8.35
1	.16	4	1.35	10	10.00
$1\frac{1}{4}$	.22	$4\frac{1}{2}$	1.85	12	15.00
$1\frac{1}{2}$	.28	5	2.00	..	.....
2	.43	6	2.70	..	.....

## GALVANIZED STANDARD REDUCERS

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
$4\frac{1}{2}$	3.70	7	10.70	10	20.00
5	4.00	8	13.50	12	30.00
6	5.40	9	16.70	..	.....

## BLACK ECCENTRIC REDUCERS

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
$1, 1\frac{1}{4}$	.55	$3\frac{1}{2}$	3.00	7	9.00
$1\frac{1}{2}$	.72	4	4.00	8	11.00
2	1.00	$4\frac{1}{2}$	5.00	9	12.50
$2\frac{1}{2}$	1.50	5	6.00	10	14.00
3	2.40	6	8.00	12	18.00

## BUSHINGS

Reducing two or more sizes up to  $2\frac{1}{2}$  inches inclusive. Reducing one or more sizes, 3 inches and up.



Fig. 8480C

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
$\frac{3}{8}, \frac{1}{2}$	.04	.08	4	.50	1.00
$\frac{3}{4}$	.05	.10	$4\frac{1}{2}$	.75	1.50
1	.06	.12	5	.93	1.85
$1\frac{1}{4}$	.07	.14	6	1.25	2.50
$1\frac{1}{2}$	.09	.18	7	1.87	3.75
2	.14	.28	8	2.75	5.50
$2\frac{1}{2}$	.21	.42	9	3.25	6.50
3	.30	.60	10	3.75	7.50
$3\frac{1}{2}$	.40	.80	12	5.00	10.00

## RADIATOR PLUGS

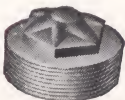


Fig. 8480D

Size In.	Price Each
$1\frac{1}{4}$	.10
$1\frac{1}{2}$	.14
2	.20

## PLUGS

## Standard

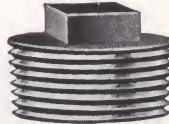


Fig. 8480E

## Countersunk

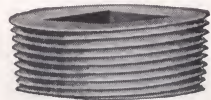


Fig. 8480F

## STANDARD

Size In.	Price, Each Black	Price, Each Galv.	Size In.	Price, Each Black	Price, Each Galv.
$\frac{1}{8}, \frac{1}{4}$	.02	.04	$3\frac{1}{2}$	.38	.76
$\frac{3}{8}$	.02	.04	4	.42	.84
$\frac{1}{2}$	.02	.04	$4\frac{1}{2}$	.65	1.30
$\frac{3}{4}$	.03	.06	5	.88	1.75
1	.04	.08	6	1.20	2.40
$1\frac{1}{4}$	.05	.10	7	1.85	3.70
$1\frac{1}{2}$	.07	.14	8	2.75	5.50
2	.10	.20	9	3.25	6.50
$2\frac{1}{2}$	.18	.36	10	3.75	7.50
3	.25	.50	12	5.00	10.00

## BLACK COUNTERSUNK

Size In.	Price, Each Solid	Price, Each Countersunk	Size In.	Price, Each Solid	Price, Each Countersunk
$\frac{1}{8}, \frac{1}{4}$	.04	...	$3\frac{1}{2}$	.57	.92
$\frac{3}{8}$	.04	.04	4	.63	1.10
$\frac{1}{2}$	.04	.04	$4\frac{1}{2}$	1.00	...
$\frac{3}{4}$	.06	.06	5	1.35	2.00
1	.08	.08	6	1.80	3.50
$1\frac{1}{4}$	.09	.09	7	2.80	...
$1\frac{1}{2}$	.11	.11	8	4.15	...
2	.15	.15	9	5.00	...
$2\frac{1}{2}$	.27	.30	10	5.75	...
3	.38	.40	12	7.50	...

## SPECIAL PLUGS

Size In.	Price, Each Left Hand	Price, Each Tapped for Air Cock	Size In.	Price, Each Left Hand	Price, Each Tapped for Air Cock
$\frac{1}{2}$	.04	...	$1\frac{1}{4}$	.09	.20
$\frac{3}{4}$	.06	.12	$1\frac{1}{2}$	.11	.25
1	.08	.15	2	.15	.30

## RADIATOR BUSHINGS

## Standard



Fig. 8480G

## Eccentric



Fig. 8480H

Size In.	Price, Each Std.	Price, Each Ecc.	Size In.	Price, Each Std.	Price, Each Ecc.
$1\frac{1}{4} \times \frac{1}{2}$	...	.22	$2 \times \frac{1}{2}$	...	.27
$1\frac{1}{4} \times \frac{3}{4}$	...	.22	$2 \times \frac{3}{4}$	.21	.27
$1\frac{1}{2} \times \frac{1}{2}$	.14	.25	$2 \times 1$	.21	.27
$1\frac{1}{2} \times \frac{3}{4}$	.14	.25	$2 \times 1\frac{1}{4}$	.21	.27
$1\frac{1}{2} \times 1$	.14	.25	$2 \times 1\frac{1}{2}$	.21	...
$1\frac{1}{2} \times 1\frac{1}{4}$	.14	...	.....	...	...

FITTINGS

MALLEABLE IRON PIPE SADDLES  
SINGLE STRAP      DOUBLE STRAP

FLANGE UNIONS  
STANDARD      EXTRA HEAVY

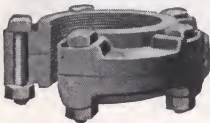


Fig. 6854A

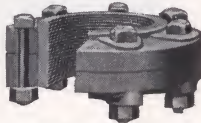


Fig. 6854B



Fig. 6854C



Fig. 6854D

STANDARD FLANGE UNIONS  
For Working Pressures up to 125 Pounds

Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2
Diameter of Flanges...inches	2 5/8	3 5/16	3 9/16	4	4 5/8	5 1/2	6 1/8	6 3/4	7 1/2	8 1/8	8 3/4
No. of Bolts in Each..	3	3	3	4	4	4	4	4	4	5	5
Price, Black.....each	.40	.46	.52	.64	.78	1.00	1.25	1.50	1.80	2.10	2.70
" Galvanized. "	.80	.92	1.04	1.28	1.56	2.00	2.50	3.00	3.60	4.20	5.40
Size.....inches	5	6	7	8	9	10	12	14	15	16	....
Diameter of Flanges...inches	9 5/8	11	12 1/4	13 1/2	14 3/8	15 1/4	18	22	22	23	....
No. of Bolts in Each..	5	6	7	7	8	10	12	14	14	16	....
Price, Black.....each	3.15	3.95	5.50	7.00	10.00	11.50	16.00	28.00	35.00	60.00	....
" Galvanized. "	6.30	7.90	11.00	14.00	20.00	23.00	32.00	56.00	70.00	120.00	....

EXTRA HEAVY FLANGE UNIONS  
For Working Pressures up to 250 Pounds

Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Diameter of Flanges...inches	3	3 1/4	3 5/8	4 1/16	4 5/8	5 3/8	6	6 3/4
No. of Bolts in Each..	3	4	4	4	4	5	5	6
Price.....each	.60	.70	.80	1.00	1.15	1.50	1.90	2.25
Size.....inches	3 1/2	4	4 1/2	5	6	7	8	....
Diameter of Flanges...inches	7 7/16	8	8 3/4	9 3/8	10 3/4	12 1/8	13 3/8	....
No. of Bolts in Each..	6	7	8	8	9	10	10	....
Price.....each	2.70	3.15	4.00	4.75	6.00	8.25	10.50	....

MALLEABLE IRON PIPE SADDLES, SINGLE STRAP

Size of Pipe.....inches	2	2 1/2	3
Tapped for Pipe.....inches	1 to 1 1/2	1 to 2	1 to 2
Price.....each	.75	1.00	1.00

MALLEABLE IRON PIPE SADDLES, DOUBLE STRAP

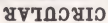
Size of Pipe.....inches	2	2 1/2	3	3 1/2	4	4 1/2	5
Tapped for Pipe.....inches	1/2 to 1 1/2	3/4 to 1 1/2	3/4 to 2	3/4 to 2	3/4 to 2	3/4 to 2	3/4 to 2
Price.....each	1.00	1.25	1.25	1.40	1.50	2.50	2.75
Size of Pipe.....inches	5	6	6	7	8	9	10
Tapped for Pipe.....inches	2 1/2 and 3	3/4 to 2	2 1/2 to 4	1 to 4	1 to 4	1 1/2 to 4	1 1/2 to 4
Price.....each	2.75	2.75	5.75	6.50	6.50	8.50	10.00
Size of Pipe.....inches	10	12	12	15	16	....	....
Tapped for Pipe.....inches	4 1/2 to 6	1 1/2 to 4	4 1/2 to 6	3 to 6	3 to 6	....	....
Price.....each	10.00	14.00	14.00	22.00	25.00	....	....



## FLANGES



Fig. 3706B

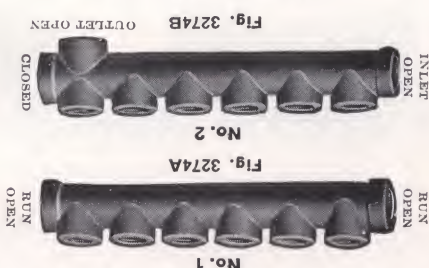
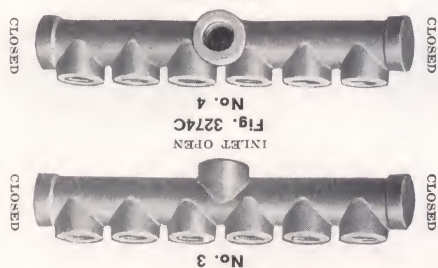


**Fig. 3706C**

## COMMON, NOT FACED

These hangers being made to order, it is always necessary to give the circle they are to fit.

## CAST IRON BRANCH TEES



## CENTER TO CENTER, 2 1/2 INCHES

No. of Branches	1 1/4	1 1/2	2	2 1/2	3
2	1.90	1.00	1.15	1.75	2.05
3	1.05	1.05	1.15	1.35	2.05
4	1.15	1.15	1.30	1.60	2.40
5	1.35	1.35	1.45	1.85	2.75
6	1.60	1.60	1.75	2.10	3.10
7	1.90	1.90	2.20	2.45	3.50
8	2.20	2.20	2.45	3.75	6.20
9	2.65	2.65	2.90	4.30	7.85
10	3.15	3.15	3.30	4.00	5.00
11	3.75	3.75	4.50	4.80	9.05
12	4.40	4.40	4.75	5.10	9.70
13	5.00	5.00	5.50	6.30	10.35
14	5.00	5.00	7.00	7.25	11.00
15	7.50	7.50	7.75	8.25	11.75
16	8.00	8.25	12.50		

## 1 1/4-INCH BRANCHES

## CENTER TO CENTER, 3 INCHES

No. of Branches	1 1/4	1 1/2	2	2 1/2	3
2	1.30	1.30	1.50	1.95	2.40
3	1.65	1.65	1.90	2.40	2.85
4	2.00	2.00	2.40	2.85	4.30
5	2.40	2.40	2.90	3.55	4.90
6	2.80	2.80	3.30	3.95	5.40
7	3.20	3.20	3.90	4.20	6.25
8	3.60	3.60	4.50	4.95	7.10
9	4.30	4.30	5.25	6.15	8.25
10	4.80	4.80	5.85	6.85	9.20
11	5.00	5.00	6.25	7.25	10.00
12	5.25	5.25	6.50	7.65	10.85
13	6.00	6.00	7.00	8.25	11.65
14	6.75	6.75	8.00	9.00	
15	7.50	7.50	8.50	9.75	
16	8.50	8.50	10.75		

## 1 1/2-INCH BRANCHES

## CENTER TO CENTER, 3 1/2 INCHES

No. of Branches	1 1/2	2	2 1/2	3	4
2	2.10	2.10	2.70	3.35	3.80
3	2.70	2.70	3.35	4.15	4.60
4	3.35	3.35	4.00	5.00	5.50
5	4.00	4.65	5.25	6.50	7.25
6	4.65	5.25	6.50	7.00	7.75
7	5.25	6.50	7.00	8.25	9.00
8	5.85	6.50	7.60	9.25	10.00
9	6.50	8.00	9.75	10.50	11.50
10	7.60	8.50	10.50	11.50	12.75
11	8.00	8.50	11.50		
12	8.50	9.50			
13	9.50				

## 2-INCH BRANCHES

## CENTER TO CENTER, 4 1/2 INCHES

No. of Branches	2	2 1/2	3	3 1/2	4
2	4.10	4.50	5.00	5.50	6.75
3	5.25	5.75	6.25	7.75	8.25
4	6.40	7.00	7.00	9.25	9.75
5	7.65	8.50	8.50	10.75	11.25
6	8.80	9.75	9.75	11.75	13.50
7	10.60	11.75	11.75	13.00	14.50
8	11.50	12.75	12.75	14.00	15.50
9	12.25	13.50	13.50	15.00	16.50
10	13.50	15.00	15.00	16.50	17.00
11	14.25	15.75	15.75	17.50	
12	15.00	16.50	16.50		
13	16.00	17.50	17.50		

Back or side outlets charged as additional front outlets; in ordering, be sure to state size of run required. When not otherwise ordered, all openings will be right hand.

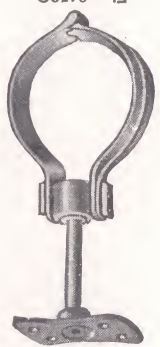
PIPE HANGERS AND BEAM CLAMPS

EXPANSION PIPE HANGERS



Tapped	
Size for Pipe In.	Price Each
1	.17
1 1/4	.17
1 1/2	.17
2	.18
2 1/2	.19
3	.25
3 1/2	.29
4	.36
4 1/2	.44
5	.55
6	.63
7	.90
8	1.12
10	1.35
12	1.80
14	2.25

CHICAGO PATENT DETACHABLE MALLEABLE PIPE HANGERS

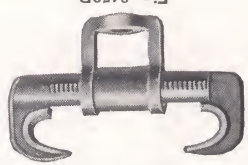


Size In.	
Price Each	Price Each
1 1/4	.32
1 1/2	.33
2	.45
2 1/2	.55

PARTS FOR EXPANSION PIPE HANGERS

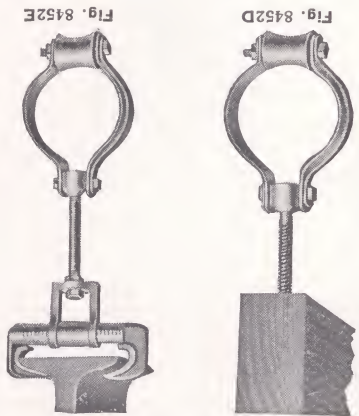
Plate	
Size Inches	Price Each
1/2	.08
3/4	.08
1	.08
1 1/4	.08
1 1/2	.09
2	.09
2 1/2	.10
3	.10
3 1/2	.10
4	.10
4 1/2	.10
5	.10
6	.10
7	.10
8	.10
Buttons	
Size	Price Each
1/2	.06
3/4	.06
1	.06
1 1/4	.06
1 1/2	.07
2	.07
2 1/2	.08
3	.08
3 1/2	.08
4	.08
4 1/2	.08
5	.08
6	.08
7	.08
8	.08

A.B.C. BEAM CLAMPS



For Pipe Rods In.	
No.	Price Each
3	.40
1 1/2	.40

CHICAGO DETACHABLE MALLEABLE ROLLER PIPE HANGERS



Size In.	
Price Each	Price Each
1 1/4	.65
1 1/2	.80
2	1.35
2 1/2	1.65
3	2.10
3 1/2	2.70
4	3.40
5	4.45
6	5.40
7	6.05
8	6.75
10	7.35
12	7.35



# PIPE HANGERS, HOOK AND EXPANSION PLATES

## ADJUSTABLE STEEL HANGER RINGS WITH BOLTS



Fig. 8669E

Size, in.	Price, ea.
1 1/4	.12
1 1/2	.14
1 3/4	.16
2	.18
2 1/2	.20
3	.25
3 1/2	.30
4	.35

## PERFORATED EXTENSION BARS



Fig. 8669F

Number	Width, inches	Gauge Steel	Price, per ft.
4	1 1/4	12	.20
3	1 1/2	12	.12
2	1 3/4	12	.09
1	2	15	.08
0	3	15	.08
0	4	15	.08

## SOLID RING PIPE HANGERS



Fig. 8669G

Size, inches	Price, per 10'
1 1/4	6.50
1 1/2	7.00
1 3/4	9.00
2	12.00

## TINNED PIPE STRAPS



Fig. 8669H

Size, inches	100 Pieces, Weight, pounds	Price, per pound
1 1/4	1 1/2	.30
1 1/2	1 3/4	.30
1 3/4	2	.30
2	2 1/2	.30
2 1/2	3	.30
3	4	.30
3 1/2	5	.30
4	6	.30
4 1/2	7	.30
5	8	.30
5 1/2	9	.30
6	10	.30
6 1/2	11	.30
7	12	.30

## CAST IRON HOOK PLATES

### Single Hook



Fig. 8669B

No. of Hooks	Price, Each	For Pipe, INCHES	BETWEEN CENTERS, INCHES	Price, Each
1	.09	1 1/4	2 1/2	.15
2	.18	1 1/2	3	.22
3	.23	1 3/4	4 1/2	.28
4	.26	2	6	.32
5	.32	2 1/2	8	.41
6	.38	3	10	.52
		3 1/2	12	.58
		4	14	.65
		4 1/2	16	.72
		5	18	.88
		6	20	.90
		7	22	1.15
		8	24	1.35



Fig. 8669A

## EXPANSION HOOK PLATES

1	For Pipe, INCHES	1 1/4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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**OPEN HEAD SPRINKLER HEADS**  
**FOR AUTOMATIC FIRE PROTECTION**



Price.....each 1.50

## CLOSED HEAD SPRINKLER HEADS

Fig. 8675E

Price.....each 1.50

When ordering, state if standard or high temperature heads are wanted.

Fig. 8675A

2	.50	Size	Each	Price
Inches				
$\frac{3}{4}$	.22	$2\frac{1}{2}$		.65
1	.28	3		.90
$1\frac{1}{4}$	.32	$3\frac{1}{2}$		1.00
$1\frac{1}{2}$	.40	4		1.20

Fig. 8675B

2	.27		
1 $\frac{1}{2}$	.23		
1 $\frac{1}{4}$	.18		
1	.16		
$\frac{3}{4}$	.13		
$\frac{1}{2}$	.11		
Price	Each		
Inches			
6			
5			
4			
3 $\frac{1}{2}$			
3			
2 $\frac{1}{2}$			
Price			
Each			
1.25			
.95			
.68			
.55			
.50			
.36			

Two technical drawings of a mechanical part, labeled "Bottom View" and "Top View". The "Bottom View" shows a circular base with four small holes and a central raised cylindrical feature. The "Top View" shows the same base from the opposite side, revealing a central circular opening and a small rectangular slot or feature on the right side.

Fig. 8675C

Size	1 1/2	1 1/4	1	3/4	1/2
Price	.14	.11	.08	.06	.06
Each	4	3 1/2	3	2 1/2	2
Size	4	3 1/2	3	2 1/2	2
Price	.42	.35	.30	.24	.16
Each	..	8	6	5	5
Size	..	8	6	5	5
Price	1.75	1.75	.60	.75	.60
Each	..	..	..	..	..

## CAST IRON LONG TURN FITTINGS

FOR STEAM WORKING PRESSURES UP TO 125 POUNDS  
FOR WATER WORKING PRESSURES UP TO 150 POUNDS

## No. 1 WATER ELBOWS



Fig. 722A

Size In.	Price, Each Black Galv.
1	.26
3/4	.52
1 1/4	.64
1 1/2	.80
2	1.10
2 1/2	1.60
3	2.25
3 1/2	3.50
4	7.00
Size In.	Price, Each Black Galv.
4 1/2	5.50
5	6.50
6	8.75
7	13.00
8	17.50
9	26.00
10	34.00
12	40.00
10	30.00
12	60.00
12	80.00



Fig. 722C

Size In.	Price, Each Black Galv.
1	.64
1 1/4	1.80
1 1/2	1.10
2	1.60
2 1/2	2.40
3	4.50
3 1/2	6.50
4	7.00
Size In.	Price, Each Black Galv.
4 1/2	1.28
5	1.60
6	2.20
7	3.20
8	4.80
9	9.00
10	13.00
12	14.00
10	60.00
12	80.00
12	160.00

## No. 2 DOUBLE BRANCH ELBOWS

## No. 3 SWEEP TEES



Fig. 722B

Size In.	Price, Each Black Galv.
1	.48
1 1/4	.60
1 1/2	.82
2	1.20
2 1/2	1.80
3	3.40
3 1/2	4.90
4	5.25
Size In.	Price, Each Black Galv.
4 1/2	.96
5	1.20
6	1.64
7	2.40
8	3.60
9	6.80
10	9.80
12	10.50
12	60.00
12	120.00

Reducing sizes, bushed in the sand can be furnished from the factory. Add 50 per cent to prices given on this page.

## No. 4 SWEEP CROSSES



Fig. 722D

Size In.	Price, Each Black Galv.
1	.85
1 1/4	1.10
1 1/2	1.50
2	2.15
2 1/2	3.20
3	6.00
3 1/2	8.75
4	9.50
Size In.	Price, Each Black Galv.
4 1/2	1.70
5	2.20
6	3.00
7	4.30
8	6.40
9	12.00
10	17.50
12	19.00
10	80.00
12	107.00
12	214.00

A complete list of reducing fittings will be furnished on application.



## CAST IRON LONG TURN FITTINGS

For steam working pressures up to 125 pounds  
For water working pressures up to 150 pounds

## ELBOWS

## FLANGED ONE END



Fig. 723A

Size Inches	Flange One End	Price, Each
2	5.00	6.00
2½	5.50	6.75
3	6.00	7.50
3½	6.50	8.50
4	7.50	10.00
5	10.00	12.50
6	14.00	17.50
7	25.00	30.00
8	30.00	35.00
10	40.00	50.00
12	53.00	65.00

## ELBOWS WITH BASE



Fig. 723B

Size Inches	Price Each
2	5.00
2½	5.50
3	6.00
3½	6.50
4	7.50
5	10.00
6	14.00
8	25.00
10	40.00
12	50.00
18.00	65.00

## TEES WITH BASE

Size Inches	Price, Each Strt. Reducing	Price, Each Strt.
1	.64	.96
1½	1.20	1.65
2	1.10	1.60
2½	2.40	3.60
3	4.50	6.75
3½	6.50	9.75
4	7.00	10.50
5	13.00	17.50
6	17.50	26.25
7	26.00	39.00
8	34.00	51.00
9	51.00	76.50
10	60.00	90.00
12	80.00	120.00



Fig. 723D

## STRAIGHT BACK TEES

In ordering, specify which ends are to  
be flanged or send sketch.

Size Inches	Flange 1 or 2	Flange 3 or 4	Price, Each
2	11.00	12.00	30.00
2½	12.50	13.50	35.00
3	13.50	15.00	60.00
3½	15.00	17.00	70.00
4	17.00	20.00	100.00
5	22.00	25.00	157.00

## CROSSES

Size Inches	Flange 1 or 2	Flange 3	Flange 1 or 2	Price, Each
2	8.00	9.00	22.00	26.00
2½	9.00	10.00	40.00	45.00
3	10.00	11.50	45.00	50.00
3½	11.00	13.00	80.00	90.00
4	12.00	15.00	105.00	120.00
5	15.00	18.00	180.00	210.00



Fig. 723C

## FLANGED TWO ENDS

## TEES

**BLACK RIGHT-HAND NIPPLES**



**CLOSE NIPPLE**



SHOULDER NIPPLE

Nipples made to order from extra heavy pipe at double above list. Threads extra.

### PLAIN RIGHT AND LEFT-HAND NIPPLES

\*These lengths conform to the Manufacturers' Standard. Add 60 per cent to above prices for galvanized right and left nipples.

Length, Inches		*Close	Short	Long	Size, Inches	Close or Short	Price, Ea.	Length, Inches		Price, Extra Long Nipples, Each
3 1/2	3 3/4	3 3/8	3 1/2	3 1/4	8	5.00	4.25	4.25	10.10	9.25
3 1/4	3 1/2	3 1/8	3 1/4	3 1/2	7	4.25	2.80	4.25	10.10	9.25
3 1/2	3 3/4	3 3/8	3 1/2	3 1/4	6	4.25	2.30	4.25	10.10	9.25
3 1/4	3 1/2	3 1/8	3 1/4	3 1/2	5	4.25	1.85	4.25	10.10	9.25
3 1/2	3 3/4	3 3/8	3 1/2	3 1/4	4	4.25	1.35	4.25	10.10	9.25
3 1/4	3 1/2	3 1/8	3 1/4	3 1/2	3	4.25	1.20	4.25	10.10	9.25
3 1/2	3 3/4	3 3/8	3 1/2	3 1/4	2	4.25	1.70	4.25	10.10	9.25
3 1/4	3 1/2	3 1/8	3 1/4	3 1/2	1	4.25	1.10	4.25	10.10	9.25
3 1/2	3 3/4	3 3/8	3 1/2	3 1/4	1/2	4.25	.86	4.25	10.10	9.25
3 1/4	3 1/2	3 1/8	3 1/4	3 1/2	1/4	4.25	.56	4.25	10.10	9.25
3 1/2	3 3/4	3 3/8	3 1/2	3 1/4	1/8	4.25	.27	4.25	10.10	9.25
3 1/4	3 1/2	3 1/8	3 1/4	3 1/2	1/16	4.25	.21	4.25	10.10	9.25
3 1/2	3 3/4	3 3/8	3 1/2	3 1/4	1/32	4.25	.17	4.25	10.10	9.25
3 1/4	3 1/2	3 1/8	3 1/4	3 1/2	1/64	4.25	.11	4.25	10.10	9.25
3 1/2	3 3/4	3 3/8	3 1/2	3 1/4	1/128	4.25	.08	4.25	10.10	9.25
3 1/4	3 1/2	3 1/8	3 1/4	3 1/2	1/256	4.25	.06	4.25	10.10	9.25
3 1/2	3 3/4	3 3/8	3 1/2	3 1/4	1/512	4.25	.06	4.25	10.10	9.25
3 1/4	3 1/2	3 1/8	3 1/4	3 1/2	1/1024	4.25	.06	4.25	10.10	9.25
3 1/2	3 3/4	3 3/8	3 1/2	3 1/4	1/2048	4.25	.06	4.25	10.10	9.25
3 1/4	3 1/2	3 1/8	3 1/4	3 1/2	1/4096	4.25	.06	4.25	10.10	9.25
3 1/2	3 3/4	3 3/8	3 1/2	3 1/4	1/8192	4.25	.06	4.25	10.10	9.25
3 1/4	3 1/2	3 1/8	3 1/4	3 1/2	1/16384	4.25	.06	4.25	10.10	9.25
3 1/2	3 3/4	3 3/8	3 1/2	3 1/4	1/32768	4.25	.06	4.25	10.10	9.25
3 1/4	3 1/2	3 1/8	3 1/4	3 1/2	1/65536	4.25	.06	4.25	10.10	9.25
3 1/2	3 3/4	3 3/8	3 1/2	3 1/4	1/131072	4.25	.06	4.25	10.10	9.25
3 1/4	3 1/2	3 1/8	3 1/4	3 1/2	1/262144	4.25	.06	4.25	10.10	9.25
3 1/2	3 3/4	3 3/8	3 1/2	3 1/4	1/524288	4.25	.06	4.25	10.10	9.25
3 1/4	3 1/2	3 1/8	3 1/4	3 1/2	1/1048576	4.25	.06	4.25	10.10	9.25
3 1/2	3 3/4	3 3/8	3 1/2	3 1/4	1/2097152	4.25	.06	4.25	10.10	9.25
3 1/4	3 1/2	3 1/8	3 1/4	3 1/2	1/4194304	4.25	.06	4.25	10.10	9.25
3 1/2	3 3/4	3 3/8	3 1/2	3 1/4	1/8388608	4.25	.06	4.25	10.10	9.25
3 1/4	3 1/2	3 1/8	3 1/4	3 1/2	1/16777216	4.25	.06	4.25	10.10	9.25
3 1/2	3 3/4	3 3/8	3 1/2	3 1/4	1/335544					

\*These lengths conform to the Manufacturers' Standard.  
Nipples made to order from galvanized extra heavy pipe at double above list.



LONG SCREWS, TANK NIPPLES, ETC.

TANK OR LOCK NUT NIPPLES



Fig. 8454D

Size	Price, Each	Price, Galv.
1/4	.10	.17
3/8	.10	.17
1/2	.12	.18
3/4	.13	.21
1	.18	.28
1 1/4	.24	.38
1 1/2	.29	.46
2	.38	.61
2 1/2	.68	1.00
3	.85	1.30

One end has American standard locknut thread 4 inches long; other has standard pipe thread. Six inches long over all.

WROUGHT IRON COUPLINGS

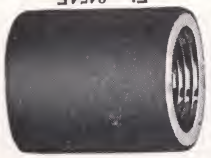


Fig. 8454E

Size	Price, Each	Price, Galv.	Price, Black
1/8	.03	.06	.06
1/4	.05	.08	.08
3/8	.07	.10	.10
1/2	.08	.11	.11
3/4	.10	.13	.13
1	.13	.17	.17
1 1/4	.17	.25	.25
1 1/2	.21	.32	.32
2	.28	.40	.40
2 1/2	.40	.55	.55
3	.50	.85	.85
3 1/2	.60	1.20	1.20
4	.80	1.60	1.60
4 1/2	1.00	2.00	2.00
5	1.50	2.00	2.00
6	1.65	2.25	2.25
7	3.25		
8	4.25		
9	5.50		
10	7.50		
12	10.00		

Price for 1 1/4-inch turned and faced couplings to fit inside of 2-inch wrought pipe upon application.

LONG SCREWS WITH COUPLING AND LOCKNUT FACED

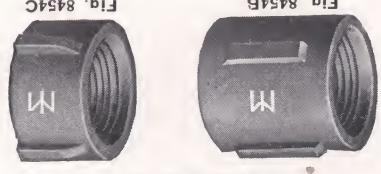


Fig. 8451A

Size	Std. Length	Price, Each
1/4	2 1/2	.35
3/8	3	.40
1/2	4	.55
3/4	5	.75
1	6	1.00
1 1/4	7	1.30
1 1/2	8	1.60
2	9	2.10
2 1/2	10	2.70
3	11	3.10
3 1/2	12	4.70
4	13	6.50
4 1/2	14	7.75

Long screws, longer than standard made to order and charged as cut pipe. In ordering specify length of thread wanted. Threads, couplings and locknuts extra. Long screws made to order from extra heavy pipe.

FACED COUPLINGS AND LOCKNUTS



Size	Price, Each	Price, Galv.	Price, Black
1/4	.09	.14	.14
3/8	.10	.15	.15
1/2	.12	.18	.18
3/4	.15	.22	.22
1	.18	.25	.25
1 1/4	.22	.30	.30
1 1/2	.25	.35	.35
2	.30	.45	.45
2 1/2	.35	.50	.50
3	.45	.65	.65

LOCKNUTS

Size	Price, Each	Price, Galv.	Price, Black
1/4	.09	.14	.14
3/8	.10	.15	.15
1/2	.12	.18	.18
3/4	.15	.24	.24
1	.18	.33	.33
1 1/4	.22	.45	.45
1 1/2	.25	.60	.60
2	.30	.75	.75

## EXTRA HEAVY CAST IRON FITTINGS

## LONG PATTERN

For Steam Working Pressures Up to 250 Pounds

## ELBOWS



Fig. 8461A

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
2	.75	5	5.50	12	40.00	12	40.00
1 1/2	.60	4 1/2	4.25	10	28.00	10	28.00
1 1/4	.45	4	3.50	8	17.00	8	17.00
1	.35	3 1/2	2.75	6	12.00	6	12.00
3/4	.30	3	2.00	7	8.00	7	8.00
1/2	.25	2 1/2	1.25	5	5.50	5	5.50
1/4	.20	2	.75	4	4.25	4	4.25
3/8	.40	1 1/2	.75	3	2.50	3	2.50
1/2	.45	2	.95	4	4.40	4	4.40
1 1/4	.55	2 1/2	1.55	5	6.80	5	6.80

## 45° ELBOWS



Fig. 8461B

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
2	.90	5	6.75	12	48.00	12	48.00
1 1/2	.70	4 1/2	5.50	10	34.00	10	34.00
1 1/4	.55	4	4.50	8	21.00	8	21.00
1	.44	3 1/2	3.50	7	14.50	7	14.50
3/4	.40	3	2.50	6	9.75	6	9.75
1/2	.35	2 1/2	1.50	5	6.00	5	6.00
1/4	.30	2	.75	4	3.75	4	3.75
3/8	.25	1 1/2	.25	3	2.25	3	2.25
1/2	.20	1 1/4	.20	2	1.50	2	1.50
3/4	.15	1 1/2	.15	1 1/2	.15	1 1/2	.15
1	.10	1	.10	1	.10	1	.10

## Y BENDS

The radius of these fittings is longer than the ordinary, thereby reducing friction. The use of screwed fittings above 6-inch is not recommended; for larger sizes flanged are more suitable.



Fig. 8461C

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
2	1.15	5	8.25	12	60.00	12	60.00
1 1/2	.90	4 1/2	6.75	10	42.00	10	42.00
1 1/4	.70	4	5.50	8	25.00	8	25.00
1	.55	3 1/2	4.25	7	18.00	7	18.00
3/4	.45	3	3.00	6	12.00	6	12.00
1/2	.40	2 1/2	1.80	5	8.25	5	8.25
1/4	.35	2	.75	4	4.25	4	4.25
3/8	.30	1 1/2	.25	3	2.50	3	2.50
1/2	.25	1 1/4	.20	2	1.50	2	1.50
3/4	.20	1 1/2	.15	1 1/2	.15	1 1/2	.15
1	.15	1	.10	1	.10	1	.10

## REDUCING TEES

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
2	1.15	5	8.25	12	60.00	12	60.00
1 1/2	.90	4 1/2	6.75	10	42.00	10	42.00
1 1/4	.70	4	5.50	8	25.00	8	25.00
1	.55	3 1/2	4.25	7	18.00	7	18.00
3/4	.45	3	3.00	6	12.00	6	12.00
1/2	.40	2 1/2	1.80	5	8.25	5	8.25
1/4	.35	2	.75	4	4.25	4	4.25
3/8	.30	1 1/2	.25	3	2.50	3	2.50
1/2	.25	1 1/4	.20	2	1.50	2	1.50
3/4	.20	1 1/2	.15	1 1/2	.15	1 1/2	.15
1	.15	1	.10	1	.10	1	.10

## CROSSES



Fig. 8461D

Size In.	Price Each	Size In.	Price Each	Size In.	Price Each	Size In.	Price Each
2	1.15	5	8.25	12	60.00	12	60.00
1 1/2	.90	4 1/2	6.75	10	42.00	10	42.00
1 1/4	.70	4	5.50	8	25.00	8	25.00
1	.55	3 1/2	4.25	7	18.00	7	18.00
3/4	.45	3	3.00	6	12.00	6	12.00
1/2	.40	2 1/2	1.80	5	8.25	5	8.25
1/4	.35	2	.75	4	4.25	4	4.25
3/8	.30	1 1/2	.25	3	2.50	3	2.50
1/2	.25	1 1/4	.20	2	1.50	2	1.50
3/4	.20	1 1/2	.15	1 1/2	.15	1 1/2	.15
1	.15	1	.10	1	.10	1	.10

Double the above prices for galvanized extra heavy fittings.

Special reducing sizes can be made to order by bushing in the sand, and will be charged for extra, according to quantity.

# EXTRA HEAVY MALLEABLE IRON FITTINGS

For Steam Working Pressures Up to 250 Pounds

## TEES



Fig. 8574C

Size In.	Price Each
1 1/4	.30
1 1/2	.40
2	.45
3	.50
3 1/2	.60
4	.80
Size In.	Price Each
1 1/4	6.50
1 1/2	7.25
2	8.00
3	9.75
3 1/2	14.25
4	32.00
5	55.00
6	90.00
8	
10	
12	

## ELBOWS



Fig. 8574A

Size In.	Price Each
1 1/4	.20
1 1/2	.25
2	.30
3	.35
3 1/2	.40
4	.55
Size In.	Price Each
1 1/4	6.50
1 1/2	7.25
2	8.00
3	9.50
3 1/2	10.00
4	12.00
5	21.00
6	37.00
8	60.00
10	
12	

## 45° ELBOWS



Fig. 8574B

Size In.	Price Each
1 1/4	.25
1 1/2	.30
2	.35
3	.42
3 1/2	.50
4	.65
5	.85
6	1.10
8	1.85
10	2.85
12	

## REDUCING FITTINGS

Long sweep elbows, 45° elbows and crosses are not carried in stock in reducing sizes, but are made to order by bushing in the sand from the straight patterns at a special price, according to quantity wanted.

Galvanized extra heavy malleable fittings made to order at 50 per cent advance on above prices.

Size In.	Price Each
1 1/4	.60
1 1/2	.80
2	.90
3	1.00
3 1/2	1.20
4	1.60
Size In.	Price Each
1 1/4	2.10
1 1/2	2.70
2	4.50
3	7.20
3 1/2	10.00
4	13.00
Size In.	Price Each
5	19.50
6	28.50
8	
10	
12	

Fig. 8574D



## CROSSES



# EXTRA HEAVY HYDRAULIC MALLEABLE IRON FITTINGS

CHICAGO, ILLINOIS

## ELBOWS



Fig. 8577A

Size In.	Price Each
1 1/4	.20
1 1/2	.25
2	.30
2 1/2	.35
3	.40
3 1/2	.45
4	.55
Size In.	Price Each
1 1/4	.70
1 1/2	.90
2	1.50
2 1/2	2.40
3	3.25
3 1/2	4.25
4	
Size In.	Price Each
5	6.50
6	9.50
8	21.00
10	37.00
12	60.00
Size In.	Price Each
1 1/4	
1 1/2	
2	
2 1/2	
3	
3 1/2	
4	

## 45° ELBOWS

Size	In.	Price	Each
1	3 1/4	.42	
	3 1/2	.35	
	3 3/8	.30	
	1 1/2	.25	
	1 1/4	.65	
	2	.85	
	2 1/2	1.10	
	2 1/2	1.85	
	3	2.85	
	3 1/2		
	4		
	5	4.00	
	6	5.00	
	8	7.50	
	10	10.50	
	12		

## LONG SWEEP ELBOWS



Fig. 8577B

Size	Price
1	.64
1 1/4	.80
1 1/2	1.10
2	1.60
Size	Price
2 1/2	2.40
3	4.50
3 1/2	6.50
4	7.00
Size	Price
5	13.00
6	17.50
8	
10	
12	

Galvanized extra heavy malleable fittings made to order at 50 per cent advance on above prices.

## TEES



Fig. 8577C

Size In.	Price Each
1 1/4	.30
1 1/2	.40
2	.45
2 1/2	.50
3	.60
3 1/2	.80
4	
Size In.	Price Each
1 1/4	1.05
1 1/2	1.35
2	2.25
2 1/2	3.60
3	5.00
3 1/2	6.50
4	
Size In.	Price Each
5	9.75
6	14.25
8	32.00
10	55.00
12	90.00
14	

## CROSSES

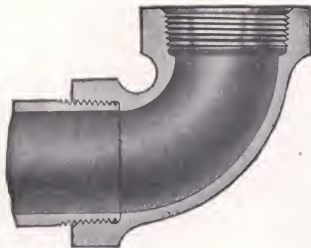


Fig. 8577D

Size	Price
1 1/4	.60
1 1/2	.80
2	.90
2 1/2	1.00
3	1.20
Size	Price
3 1/2	1.60
4	2.10
4 1/2	2.70
5	4.50
6	7.20
Size	Price
8	13.00
10	19.50
12	28.50
14	
16	
18	
20	
22	
24	
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## REDUCING FITTINGS

Long sweep elbows, 45° elbows and crosses are not carried in stock in reducing sizes, but will be made to order by pushing in the sand from straight patterns at a special price according to quantity desired.

**CAST IRON DRAINAGE FITTINGS****SCREWED FOR WROUGHT PIPE**

The attention of the trade is called to the largely increased number of sizes and the variety of drainage fittings that we now carry regularly in stock.

Our drainage fittings are made with a shoulder and are of the same inside diameter as wrought pipe; the pipe screws in up to the shoulder, thus making a continuous passage with no pocket and, consequently, the pipe cannot choke up.

When not otherwise specified, these fittings will be furnished with asphaltum coating. All drainage fittings are recessed to allow easy entrance of the pipe and all 90° fittings are threaded pitched  $\frac{1}{4}$  inch to foot.

**GALVANIZED CAST IRON DRAINAGE FITTINGS**

We carry in stock and can furnish galvanized drainage fittings promptly.

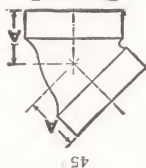
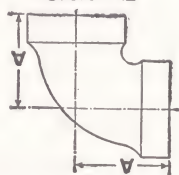
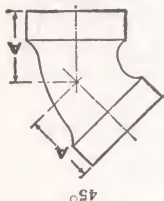
**MALLEABLE IRON DRAINAGE FITTINGS**

We make drainage fittings of malleable iron from the regular patterns and are prepared to fill orders with reasonable promptness. They are sold at a special discount from the regular list.

## CAST IRON DRAINAGE FITTINGS

SCREWED FOR IRON PIPE

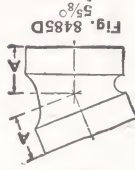
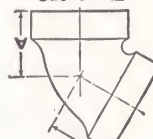
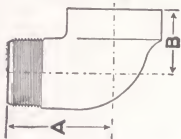
## LONG TURN ELBOWS



Size In.	Dim. A	Price, Each	Black	Galv.
1 1/4	1 3/8	.30	.52	.67
1 1/2	1 7/8	.38	.67	.82
2	2 1/4	.57	1.00	1.20
2 1/2	2 7/8	.82	1.20	1.45
3	3 1/4	1.00	1.45	1.70
4	4 1/4	1.20	1.70	2.00
5	5 1/4	1.45	2.00	2.30
6	6 1/4	1.70	2.30	2.60
7	7 1/4	2.00	2.60	2.90
8	8 1/4	2.30	2.90	3.20
10	10 1/4	2.90	3.50	3.80
12	12 1/4	3.50	4.10	4.40
14	14 1/4	4.10	4.70	5.00
16	16 1/4	4.70	5.30	5.60
18	18 1/4	5.30	5.90	6.20
20	20 1/4	5.90	6.50	6.80
22	22 1/4	6.50	7.10	7.40
24	24 1/4	7.10	7.70	8.00
26	26 1/4	7.70	8.30	8.60
28	28 1/4	8.30	8.90	9.20
30	30 1/4	8.90	9.50	9.80
32	32 1/4	9.50	10.10	10.40
34	34 1/4	10.10	10.70	11.00
36	36 1/4	10.70	11.30	11.60
38	38 1/4	11.30	11.90	12.20
40	40 1/4	11.90	12.50	12.80
42	42 1/4	12.50	13.10	13.40
44	44 1/4	13.10	13.70	14.00
46	46 1/4	13.70	14.30	14.60
48	48 1/4	14.30	14.90	15.20
50	50 1/4	14.90	15.50	15.80
52	52 1/4	15.50	16.10	16.40
54	54 1/4	16.10	16.70	17.00
56	56 1/4	16.70	17.30	17.60
58	58 1/4	17.30	17.90	18.20
60	60 1/4	17.90	18.50	18.80

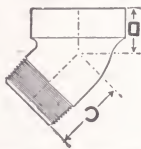
Size In.	Dim. A	Price, Each	Black	Galv.
1 1/4	1 3/8	.30	.52	.67
1 1/2	1 7/8	.38	.67	.82
2	2 1/4	.57	1.00	1.20
2 1/2	2 7/8	.82	1.20	1.45
3	3 1/4	1.00	1.45	1.70
4	4 1/4	1.20	1.70	2.00
5	5 1/4	1.45	2.00	2.30
6	6 1/4	1.70	2.30	2.60
7	7 1/4	2.00	2.60	2.90
8	8 1/4	2.30	2.90	3.20
10	10 1/4	2.90	3.50	3.80
12	12 1/4	3.50	4.10	4.40
14	14 1/4	4.10	4.70	5.00
16	16 1/4	4.70	5.30	5.60
18	18 1/4	5.30	5.90	6.20
20	20 1/4	5.90	6.50	6.80
22	22 1/4	6.50	7.10	7.40
24	24 1/4	7.10	7.70	8.00
26	26 1/4	7.70	8.30	8.60
28	28 1/4	8.30	8.90	9.20
30	30 1/4	8.90	9.50	9.80
32	32 1/4	9.50	10.10	10.40
34	34 1/4	10.10	10.70	11.00
36	36 1/4	10.70	11.30	11.60
38	38 1/4	11.30	11.90	12.20
40	40 1/4	11.90	12.50	12.80
42	42 1/4	12.50	13.10	13.40
44	44 1/4	13.10	13.70	14.00
46	46 1/4	13.70	14.30	14.60
48	48 1/4	14.30	14.90	15.20
50	50 1/4	14.90	15.50	15.80
52	52 1/4	15.50	16.10	16.40
54	54 1/4	16.10	16.70	17.00
56	56 1/4	16.70	17.30	17.60
58	58 1/4	17.30	17.90	18.20
60	60 1/4	17.90	18.50	18.80

## 90° STREET ELBOWS



Size In.	Dim. A	Price, Each	Black	Galv.
1 1/4	1 3/8	.30	.52	.67
1 1/2	1 7/8	.38	.67	.82
2	2 1/4	.57	1.00	1.20
2 1/2	2 7/8	.82	1.20	1.45
3	3 1/4	1.00	1.45	1.70
4	4 1/4	1.20	1.70	2.00
5	5 1/4	1.45	2.00	2.30
6	6 1/4	1.70	2.30	2.60
7	7 1/4	2.00	2.60	2.90
8	8 1/4	2.30	2.90	3.20
10	10 1/4	2.90	3.50	3.80
12	12 1/4	3.50	4.10	4.40
14	14 1/4	4.10	4.70	5.00
16	16 1/4	4.70	5.30	5.60
18	18 1/4	5.30	5.90	6.20
20	20 1/4	5.90	6.50	6.80
22	22 1/4	6.50	7.10	7.40
24	24 1/4	7.10	7.70	8.00
26	26 1/4	7.70	8.30	8.60
28	28 1/4	8.30	8.90	9.20
30	30 1/4	8.90	9.50	9.80
32	32 1/4	9.50	10.10	10.40
34	34 1/4	10.10	10.70	11.00
36	36 1/4	10.70	11.30	11.60
38	38 1/4	11.30	11.90	12.20
40	40 1/4	11.90	12.50	12.80
42	42 1/4	12.50	13.10	13.40
44	44 1/4	13.10	13.70	14.00
46	46 1/4	13.70	14.30	14.60
48	48 1/4	14.30	14.90	15.20
50	50 1/4	14.90	15.50	15.80
52	52 1/4	15.50	16.10	16.40
54	54 1/4	16.10	16.70	17.00
56	56 1/4	16.70	17.30	17.60
58	58 1/4	17.30	17.90	18.20
60	60 1/4	17.90	18.50	18.80

## 45° STREET ELBOWS



Size In.	Dim. A	Price, Each	Black	Galv.
1 1/4	1 3/8	.30	.52	.67
1 1/2	1 7/8	.38	.67	.82
2	2 1/4	.57	1.00	1.20
2 1/2	2 7/8	.82	1.20	1.45
3	3 1/4	1.00	1.45	1.70
4	4 1/4	1.20	1.70	2.00
5	5 1/4	1.45	2.00	2.30
6	6 1/4	1.70	2.30	2.60
7	7 1/4	2.00	2.60	2.90
8	8 1/4	2.30	2.90	3.20
10	10 1/4	2.90	3.50	3.80
12	12 1/4	3.50	4.10	4.40
14	14 1/4	4.10	4.70	5.00
16	16 1/4	4.70	5.30	5.60
18	18 1/4	5.30	5.90	6.20
20	20 1/4	5.90	6.50	6.80
22	22 1/4	6.50	7.10	7.40
24	24 1/4	7.10	7.70	8.00
26	26 1/4	7.70	8.30	8.60
28	28 1/4	8.30	8.90	9.20
30	30 1/4	8.90	9.50	9.80
32	32 1/4	9.50	10.10	10.40
34	34 1/4	10.10	10.70	11.00
36	36 1/4	10.70	11.30	11.60
38	38 1/4	11.30	11.90	12.20
40	40 1/4	11.90	12.50	12.80
42	42 1/4	12.50	13.10	13.40
44	44 1/4	13.10	13.70	14.00
46	46 1/4	13.70	14.30	14.60
48	48 1/4	14.30	14.90	15.20
50	50 1/4	14.90	15.50	15.80
52	52 1/4	15.50	16.10	16.40
54	54 1/4	16.10	16.70	17.00
56	56 1/4	16.70	17.30	17.60
58	58 1/4	17.30	17.90	18.20
60	60 1/4	17.90	18.50	18.80

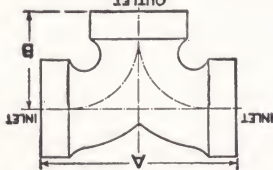
Size In.	Dim. A	Price, Each	Black	Galv.
1 1/4	1 3/8	.30	.52	.67
1 1/2	1 7/8	.38	.67	.82
2	2 1/4	.57	1.00	1.20
2 1/2	2 7/8	.82	1.20	1.45
3	3 1/4	1.00	1.45	1.70
4	4 1/4	1.20	1.70	2.00
5	5 1/4	1.45	2.00	2.30
6	6 1/4	1.70	2.30	2.60
7	7 1/4	2.00	2.60	2.90
8	8 1/4	2.30	2.90	3.20
10	10 1/4	2.90	3.50	3.80
12	12 1/4	3.50	4.10	4.40
14	14 1/4	4.10	4.70	5.00
16	16 1/4	4.70	5.30	5.60
18	18 1/4	5.30	5.90	6.20
20	20 1/4	5.90	6.50	6.80
22	22 1/4	6.50	7.10	7.40
24	24 1/4	7.10	7.70	8.00
26	26 1/4	7.70	8.30	8.60
28	28 1/4	8.30	8.90	9.20
30	30 1/4	8.90	9.50	9.80
32	32 1/4	9.50	10.10	10.40
34	34 1/4	10.10	10.70	11.00
36	36 1/4	10.70	11.30	11.60
38	38 1/4	11.30	11.90	12.20
40	40 1/4	11.90	12.50	12.80
42	42 1/4	12.50	13.10	13.40
44	44 1/4	13.10	13.70	14.00
46	46 1/4	13.70	14.30	14.60
48	48 1/4	14.30	14.90	15.20
50	50 1/4	14.90	15.50	15.80
52	52 1/4	15.50	16.10	16.40
54	54 1/4	16.10	16.70	17.00
56	56 1/4	16.70	17.30	17.60
58	58 1/4	17.30	17.90	18.20
60	60 1/4	17.90	18.50	18.80



# CAST IRON DRAINAGE FITTINGS

## SCREWED FOR WROUGHT PIPE

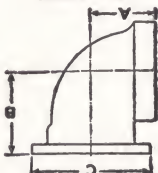
### THREE-WAY ELBOWS



Size Inches	A Inches	B Inches	Price, Each Black, Galv.
1 1/4	4 1/2	2 1/4	1.25
1 1/2	5 1/4	2 5/8	1.50
2	6 1/4	3 1/8	1.95
2 1/2	7 3/8	3 11/16	3.90
3	8 5/8	4 5/16	5.25
4	10 3/8	5 3/16	8.75
4x3	9 1/2	4 5/8	9.65
5	12 1/4	6 1/8	13.15
5x4	11 3/8	5 9/16	14.50
6	14 1/4	7 1/8	23.50
6x4	12 3/8	5 7/16	26.25
6x3	13 3/8	6 1/4	26.25

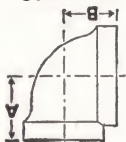
The inlets of three-way elbows are tapped, pitched 1/4 inch to the foot.

### FLANGED ONE END CLOSED ELBOWS



Size Inches	Diam. In.	Flange Inches	Price, Each Black, Galv.
4	4 5/8	7	4.25
3 3/8	4 1/8	7	7.40

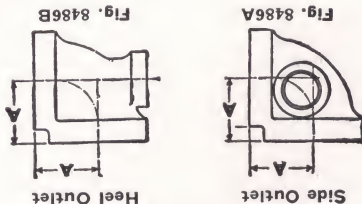
### REDUCING CLOSED ELBOWS



Size Inches	A Inches	B Inches	Price, Each Black, Galv.
4x3	4 7/8	3 3/8	4.25
4x2	4 1/2	3 1/8	7.40

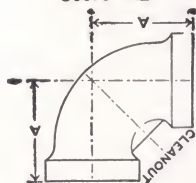
The inlets of closed elbows are tapped, pitched 1/4 inch to the foot. Dimensions subject to a slight variation and change without notice.

### 90° ELBOWS



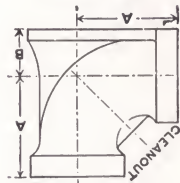
Desc.	Size In.	Dim. A In.	Outlets. In.	Price, Each Black, Galv.
Side	4	3 3/8	2	6.75
Heel	4	3 3/8	2	3.85

### 90° LONG TURN ELBOWS WITH CLEANOUT



Size In.	Dim. A In.	Outlets. In.	Price, Each Black, Galv.
4	6 1/4	2	5.00
6	10 1/4	2	8.75

### 90° LONG TURN ELBOWS WITH CLEANOUT AND BASE



Size In.	Dim. A In.	Outlets. In.	Price, Each Black, Galv.
4	6 1/4	2 1/2	7.00
6	10 1/4	2 1/2	12.25

The inlets on reducing fittings are always the smallest openings. Dimensions subject to a slight variation and change without notice.

## CAST IRON DRAINAGE FITTINGS SCREWED FOR WROUGHT PIPE

### BASIN TEES

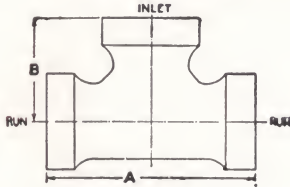


Fig. 1241A

Size Inches	DIMENSIONS, INCHES		PRICE, EACH	
	A	B	Black	Galv.
1 1/4	4 5/8	2 5/16	.60	1.00
1 1/2	5 3/8	2 11/16	.70	1.22
1 1/2 x 1 1/4	5 1/8	2 9/16	.77	1.35
2	7	3 1/2	1.10	1.95
2 x 1 1/4	6 1/4	3 1/8	1.20	2.10
2 x 1 1/2	6 1/2	3 1/4	1.20	2.10
2 1/2	8 1/2	4 1/4	1.75	3.00

### BASIN CROSSES

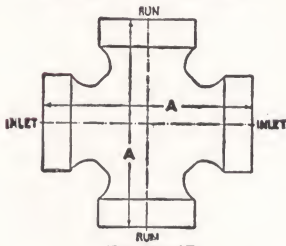


Fig. 1241B

Size Inches	Dimensions, A Inches	PRICE, EACH	
		Black	Galv.
1 1/4	4 5/8	1.25	2.25
1 1/2	5 3/8	1.50	2.50
2	7	1.75	3.10
2 x 1 1/2	6 1/2	1.95	3.40

Inlets of basin tees and crosses are tapped, pitched 1/4 inch to the foot.

Inlets on reducing fittings are always the smallest opening.

These fittings have an interior shoulder, and are made with same inside capacity as the inside diameter of the pipe, thus securing an unobstructed surface, allowing all solid matter to pass without choking the pipes.

Fittings are chamfered, thus preventing damage to the threads and permitting of an easy entrance of the pipe in making up joints.

When not otherwise specified, fittings will be coated with heated asphaltum.

Dimensions subject to a slight variation and change without notice.

### TEES

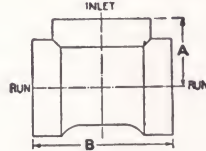


Fig. 1241C

Size Inches	DIMENSIONS, INCHES		PRICE, EACH	
	A	B	Black	Galv.
1 1/4	1 3/4	3 1/2	.45	.80
1 1/2	2 3/16	4 3/8	.55	1.00
1 1/2 x 1 1/4	2 5/16	4 5/8	.60	1.10
2	2 5/16	4 5/8	.80	1.40
2 x 1 1/4	...	...	.90	1.60
2 x 1 1/2	2 1/4	4 7/8	.90	1.60
2 1/2	2 9/16	5 5/8	1.50	2.50
2 1/2 x 2	...	...	1.65	2.75
3	3 3/16	6 3/8	2.00	3.50
3 x 1 1/2	...	...	2.20	3.85
3 x 2	3	5 1/2	2.20	3.85
4	4	8	3.25	5.70
4 x 2	3 9/16	6	3.60	6.30
4 x 3	3 3/4	7	3.60	6.30
5	4 5/8	9 1/4	6.00	10.50
5 x 2	4 3/16	6	6.60	11.55
5 x 3	4 3/8	6 7/8	6.60	11.55
5 x 4	...	...	6.60	11.55
6	5 3/16	10 3/8	8.75	15.25
7	5 9/16	11 5/8	16.00	28.00
8	6 1/2	13	21.00	37.00
10	7 3/4	15 1/2	43.00	75.00
12	9	18	60.00	100.00
12 x 8	...	...	65.00	110.00
12 x 10	...	...	65.00	110.00
14 x 8	...	...	85.00	145.00
14 x 10	...	...	85.00	145.00
14 x 12	...	...	85.00	145.00

Inlets of tees are tapped, pitched 1/4 inch to the foot.

### PARTITION CROSSES

Partition crosses are made to supply a demand in certain localities, but may not be passed by inspectors everywhere.

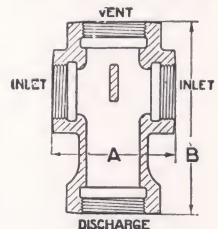


Fig. 1241D

Size Inches	DIMENSIONS, INCHES		PRICE, EACH	
	A	B	Black	Galv.
1 1/4 x 1 1/2	3 1/2	5 1/2	1.25	2.20

CAST IRON DRAINAGE FITTINGS  
SCREWED FOR WROUGHT PIPE

90° Y BRANCH  
TEE PATTERN

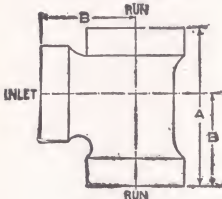


Fig. 1247A

60° Y BRANCH

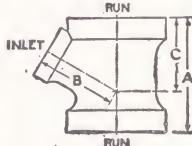


Fig. 1247B

REDUCING 90° Y BRANCHES

TEE PATTERN

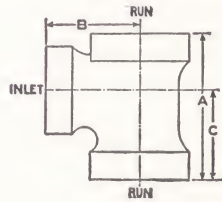


Fig. 1247C

90° Y BRANCHES  
TEE PATTERN

Size Inches	DIMENSIONS, IN.		PRICE, EACH	
	A	B	Black	Galv.
1	3 1/4	1 5/16	.40	.70
1 1/4	3 3/4	2 1/4	.45	.80
1 1/2	4 1/4	2 1/2	.57	1.00
2	5 5/16	3 1/16	.85	1.50
2 1/2	6 5/16	3 1/16	1.80	3.15
3	7 1/4	4 1/4	2.20	3.85
4	8 3/4	5 3/16	3.50	6.15
5	10 5/16	6 1/8	6.50	11.35
6	11 15/16	7 1/8	9.50	16.50
7	13 5/8	8 1/8	17.50	30.50
8	15 1/16	9	23.00	40.00
10	20	11 3/8	47.00	82.00
12	24 1/2	13 3/4	70.00	124.00

60° Y BRANCHES

Size Inches	DIMENSIONS, IN.			PRICE, EACH	
	A	B	C	Black	Galv.
1 1/2 x 1 1/2	4 5/8	2 5/8	2 5/8	.65	1.15
2 x 2	5 1/2	3 1/4	3 1/4	.95	1.65
2 x 1 1/2	4 5/16	3 1/16	2 5/16	1.05	1.85
3 x 2	6 7/16	4 1/8	3 5/16	2.90	5.10
4 x 4	9 3/8	5 3/4	5 3/4	3.85	6.75
4 x 2	6 11/16	4 3/4	4 5/16	4.25	7.40
4 x 3	...	...	...	4.25	7.40
5 x 5	11 1/8	6 3/4	6 3/4	7.10	12.50
5 x 2	...	...	...	7.80	13.65
5 x 3	8 1/2	6	5 9/16	7.80	13.65
5 x 4	...	...	...	7.80	13.65
6 x 6	13	7 7/8	7 7/8	10.50	18.50
6 x 2	...	...	...	11.50	20.00
6 x 4	...	...	...	11.50	20.00
6 x 5	...	...	...	11.50	20.00
8 x 4	...	...	...	27.50	48.00
8 x 6	...	...	...	27.50	48.00

Size Inches	DIMENSIONS, INCHES			PRICE, EACH	
	A	B	C	Black	Galv.
1 1/4 x 1	...	...	...	.50	.90
1 1/2 x 1	...	...	...	.63	1.10
1 1/2 x 1 1/4	3 7/8	2 1/2	2 5/8	.63	1.10
2 x 1 1/4	...	...	...	.95	1.65
2 x 1 1/2	4 5/8	2 5/16	2 11/16	.95	1.65
2 1/2 x 1 1/4	...	...	...	2.00	3.50
2 1/2 x 1 1/2	4 7/8	3 1/16	2 7/16	2.00	3.50
2 1/2 x 2	5 1/2	3 5/16	3 1/4	2.00	3.50
3 x 1 1/4	...	...	...	2.40	4.20
3 x 1 1/2	5 1/16	3 5/16	2 7/16	2.40	4.20
3 x 2	5 11/16	3 5/8	3 5/16	2.40	4.20
4 x 1 1/4	...	...	...	3.85	6.75
4 x 1 1/2	5 1/4	3 11/16	3	3.85	6.75
4 x 2	5 13/16	4 1/16	3 3/8	3.85	6.75
4 x 2 1/2	6 5/8	4 7/16	3 5/16	3.85	6.75
4 x 3	7 3/8	4 3/4	4 3/8	3.85	6.75
3 x 4	8 5/8	5 3/16	5 1/8	3.85	6.75
5 x 1 1/2	5 9/16	4 3/8	3 3/16	7.15	12.50
5 x 2	6 1/8	4 5/8	3 9/16	7.15	12.50
5 x 2 1/2	...	...	...	7.15	12.50
5 x 3	7 3/4	5 1/4	4 1/2	7.15	12.50
5 x 4	9 1/8	5 1/16	5 3/8	7.15	12.50
6 x 1 1/2	...	...	...	10.50	18.50
6 x 2	6 1/4	5 1/8	3 5/8	10.50	18.50
6 x 3	7 1/8	5 3/4	4 9/16	10.50	18.50
6 x 4	9 1/4	6 3/16	5 7/16	10.50	18.50
6 x 5	10 9/16	6 5/8	6 1/4	10.50	18.50
8 x 2	...	...	...	25.50	44.50
8 x 3	11 7/16	7 1/4	7 15/16	25.50	44.50
8 x 4	11 7/16	7 9/16	7 1/2	25.50	44.50
8 x 5	...	...	...	25.50	44.50
8 x 6	15 1/16	8 1/2	10	25.00	44.50

The inlet of 90° Y branches is tapped, pitched 1/4 inch to the foot.

These fittings have an interior shoulder, and are made with same inside capacity as the inside diameter of the pipe, thus securing an unobstructed surface, allowing all solid matter to pass without choking the pipe.

Reducing sizes not listed take same list as reducing sizes having the same run.

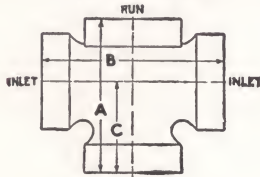
All fittings are regularly made of a gray iron, of superior quality and high tensile strength, and thoroughly inspected before leaving factory.

Dimensions subject to a slight variation and change without notice.

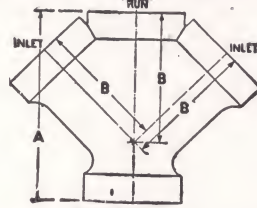


**CAST IRON DRAINAGE FITTINGS**

SCREWED FOR WROUGHT PIPE

**DOUBLE 90° Y BRANCHES****TEE PATTERN****Fig. 1249A**

Size Inches	DIMENSIONS, INCHES			PRICE, EACH	
	A	B	C	Black	Galv.
1	3 1/4	3 7/8	1 15/16	.60	1.05
1 1/4	3 3/4	4 1/2	2 1/4	.70	1.22
1 1/2	4 1/4	5	2 1/2	.85	1.50
2	5 5/16	6 1/8	3 1/16	1.30	2.30
2 1/2	6 5/16	7 3/8	3 11/16	2.85	5.00
3	7 1/4	8 1/2	4 1/4	3.40	5.95
4	8 3/4	10 3/8	5 3/16	5.25	9.20
5	10 5/16	12 1/4	6 1/8	9.50	16.50
6	11 5/16	14 1/4	7 1/8	14.00	24.50
7	13 3/8	16 1/4	8 1/8	25.00	42.50
8	15 1/16	18	9	36.00	62.00
10	20	22 3/4	11 3/8	60.00	102.00

**DOUBLE 45° Y BRANCHES****Fig. 1249C**

Size Inches	DIMENSIONS, INCHES			PRICE, EACH	
	A	B	C	Black	Galv.
1 1/4	5	3 1/4		.90	1.60
1 1/2	5 1/2	3 5/8		1.00	1.75
2	6 1/8	4 5/16		1.45	2.55
2 1/2	7 1/8	5 3/8		3.25	5.70
3	9	6 3/16		4.00	7.00
4	10 7/8	7 1/16		5.75	10.00
5	12 5/16	9 3/16		10.75	18.80
6	14 3/4	10 3/4		16.00	28.00
7	16 11/16	12 1/4		28.50	50.00
8	18 3/16	13 9/16		38.00	66.50
10	20	16 1/8		78.00	137.00

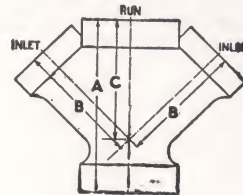
**REDUCING DOUBLE 90° Y BRANCHES—TEE PATTERN****Fig. 1249B**

Size Inches	DIMENSIONS, INCHES			PRICE, EACH	
	A	B	C	Black	Galv.
1 1/4 x 1	...	...	...	.77	1.35
1 1/2 x 1 1/4	3 7/8	5	2 3/8	.95	1.65
2 x 1 1/4	...	...	...	1.50	2.60
2 x 1 1/2	4 5/8	5 7/8	2 11/16	1.50	2.60
2 1/2 x 1 1/2	...	...	...	3.15	5.50
2 1/2 x 2	5 1/2	6 5/8	3 1/4	3.15	5.50
3 x 1 1/2	5 1/16	6 5/8	2 15/16	3.75	6.55
3 x 2	5 11/16	7 1/4	3 5/16	3.75	6.55
4 x 2	5 13/16	8 1/8	3 3/8	5.75	10.00
5 x 4	9 1/8	11 3/8	5 3/8	10.50	18.50
6 x 2	6 1/4	10 1/4	3 5/8	15.50	27.00
6 x 4	9 1/4	12 3/8	5 7/16	15.50	27.00
6 x 5	10 9/16	13 3/4	6 7/4	15.50	27.00
8 x 6	15 1/16	17	10	40.00	68.00

The inlets of double 90° Y branches are tapped, pitched 1/4 inch to the foot.

The inlets on reducing fittings are always the smallest openings.

Dimensions subject to a slight variation add change without notice.

**REDUCING DOUBLE 45° Y BRANCHES****Fig. 1249D**

Size Inches	DIMENSIONS, INCHES			PRICE, EACH	
	A	B	C	Black	Galv.
1 1/2 x 1 1/4	...	...	...	1.10	1.90
2 x 1 1/2	5 7/8	4 1/8	4 1/16	1.60	2.80
2 1/2 x 1 1/4	...	...	...	3.60	6.30
2 1/2 x 1 1/2	6 7/16	4 5/8	4 9/16	3.60	6.30
3 x 1 1/2	6 5/8	5 1/16	4 5/16	4.40	7.70
3 x 2	7 5/8	5 3/8	5 1/16	4.40	7.70
4 x 2	7 11/16	6 5/8	6	6.35	11.00
4 x 3	9 1/4	7 3/16	6 7/8	6.35	11.00
5 x 2	8 1/4	7 3/16	6 7/8	11.75	20.50
5 x 3	9 9/16	7 7/8	7 5/8	11.75	20.50
5 x 4	11 3/8	8 1/2	8 3/16	11.75	20.50
6 x 2	8 7/16	8 1/16	7 9/16	17.50	30.50
6 x 3	...	...	...	17.50	30.50
6 x 4	11 7/8	9 3/8	9 1/16	17.50	30.50
7 x 6	...	...	...	31.50	54.00
8 x 4	11 1/16	11	10 7/16	42.00	72.00
8 x 6	14 5/16	12 3/8	11 7/8	42.00	72.00

## CAST IRON DRAINAGE FITTINGS

### SCREWED FOR WROUGHT PIPE

#### 45° Y BRANCHES

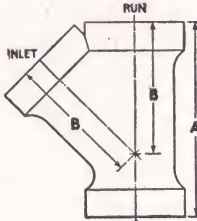


Fig. 1251A

Size Inches	DIMENSIONS, INCHES			PRICE, EACH	
	A	B	C	Black	Galv.
1 1/4	5	3 1/4		.52	.90
1 1/2	5 1/2	3 5/8		.65	1.15
2	6 7/16	4 5/16		.95	1.65
2 1/2	7 7/8	5 3/8		2.10	3.70
3	9	6 3/16		2.65	4.65
4	10 7/8	7 11/16		3.85	6.75
5	12 15/16	8 9/16		7.10	12.50
6	14 3/4	10 3/4		10.50	18.50
7	16 11/16	12 1/4		19.00	33.25
8	18 13/16	13 9/16		25.00	44.00
10	20	16 1/8		52.00	91.00
12	24 1/4	19 5/8		75.00	130.00
14	28	21 1/2		95.00	165.00

#### 90° LONG TURN Y BRANCHES TEE PATTERN

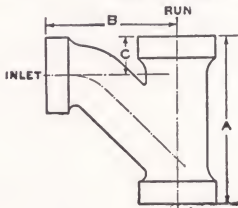


Fig. 1251B

Size Inches	DIMENSIONS, INCHES				PRICE, EACH	
	A	B	C	D	Black	Galv.
1 1/4	4 3/4	3 5/8	1 3/16		.57	1.00
1 1/2	5 3/8	4 1/8	1 1/4		.70	1.22
2	7 1/16	5 7/16	1 5/8		1.10	1.95
2 1/2	8 1/4	6 1/4	2		2.40	4.20
3	9 9/16	7 1/2	2 5/16		3.35	5.85
4	13 3/4	9 7/8	2 7/8		6.00	10.50
5	15 3/4	12 1/4	3 1/2		9.50	16.50
6	18 1/16	14 9/16	4 1/8		20.00	35.00
7	21 5/8	16 7/8	4 3/4		30.00	52.50
8	24 9/16	19 5/16	5 1/4		40.00	70.00

The inlet of all 90° long turn Y branches is tapped, pitched 1/4 inch to foot.

The inlets on reducing fittings are always the smallest openings.

#### DOUBLE 90° LONG TURN Y BRANCHES TEE PATTERN

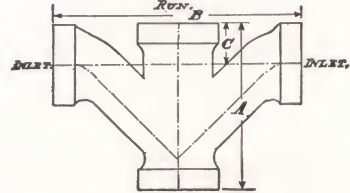


Fig. 1251C

Size Inches	DIMENSIONS, INCHES			PRICE, EACH	
	A	B	C	Black	Galv.
1 1/4	4 3/4	7 1/4	1 3/16	1.00	1.75
1 1/2	5 3/8	8 1/4	1 1/4	1.10	1.95
2	7 1/16	10 7/8	1 5/8	1.75	3.10
2 1/2	8 1/4	12 1/2	2	3.60	6.30
3	9 9/16	15	2 5/16	5.00	8.75
4	13 3/4	19 3/4	2 7/8	9.00	15.75
5	15 3/4	24 1/2	3 1/2	14.00	24.50
6	18 1/16	29 1/8	4 1/2	30.00	52.50
7	21 5/8	33 3/4	4 3/4	45.00	79.00
8	24 9/16	38 5/8	5 1/4	60.00	105.00

#### REDUCING DOUBLE 90° LONG TURN Y BRANCHES TEE PATTERN

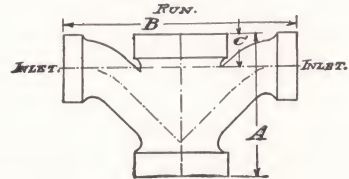


Fig. 1251D

Size Inches	DIMENSIONS, INCHES			PRICE, EACH	
	A	B	C	Black	Galv.
1 1/4 x 1	4 1/4	7	1	1.10	1.90
1 1/2 x 1	4 1/2	7 1/4	1	1.25	2.25
1 1/2 x 1 1/4	5 1/8	7 3/4	1 3/16	1.25	2.25
2 x 1 1/4	5 3/4	8 3/4	1 5/16	1.90	3.35
2 x 1 1/2	5 3/4	8 3/4	1 5/16	1.90	3.35
2 1/2 x 1 1/4	5 3/4	9 1/8	1 5/16	4.00	7.00
2 1/2 x 1 1/2	5 3/4	9 1/8	1 5/16	4.00	7.00
3 x 1 1/2	5 5/16	10	1 5/16	5.50	9.65
3 x 2	7 9/16	12 1/8	1 5/8	5.50	9.65
4 x 2	7 11/16	13 1/4	1 5/8	10.00	17.50
4 x 3	10	16 1/8	2 3/8	10.00	17.50
5 x 4	13	20 7/8	2 7/8	15.50	27.00
6 x 2	7 15/16	15 1/2	1 5/8	33.00	58.00
6 x 4	13 1/16	22	2 7/8	33.00	58.00
6 x 5	16 1/16	25 5/8	3 1/2	33.00	58.00

Dimensions subject to a slight variation and change without notice.

# CAST IRON DRAINAGE FITTINGS

## SCREWED FOR WROUGHT PIPE

### REDUCING 45° Y BRANCHES

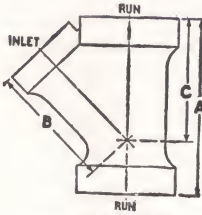


Fig. 1252A

Size Inches	DIMENSIONS, INCHES <sup>A</sup>			PRICE, EACH	
	A	B	C	Black	Galv.
1½ x 1¼	.....	.....	.....	.72	1.25
2 x 1¼	.....	.....	.....	1.05	1.85
2 x 1½	5⅞	4⅞	4⅞	1.05	1.85
2½ x 1¼	.....	.....	.....	2.30	4.00
2½ x 1½	6⅞	4⅞	4⅞	2.30	4.00
2½ x 2	7⅞	5⅞	4⅞	2.30	4.00
3 x 1¼	.....	.....	.....	2.90	5.10
3 x 1½	6⅞	5⅞	4⅞	2.90	5.10
3 x 2	7⅞	5⅞	5⅞	2.90	5.10
3 x 2½	8	5⅞	5⅞	2.90	5.10
4 x 1¼	.....	.....	.....	4.25	7.40
4 x 1½	7⅞	6⅞	5⅞	4.25	7.40
4 x 2	7⅞	6⅞	6	4.25	7.40
4 x 2½	.....	.....	.....	4.25	7.40
4 x 3	9¼	7⅞	6⅞	4.25	7.40
5 x 2	8¼	7⅞	6⅞	7.80	13.65
5 x 3	9⅞	7⅞	7⅞	7.80	13.65
5 x 4	11⅞	8½	8⅞	7.80	13.65
6 x 2	8⅞	8⅞	7⅞	11.50	20.00
6 x 2½	.....	.....	.....	11.50	20.00
6 x 3	10	8¾	8⅞	11.50	20.00
6 x 4	11⅞	9⅞	9⅞	11.50	20.00
6 x 5	13	10	9⅞	11.50	20.00
7 x 3	10	9⅞	8⅞	21.00	37.00
7 x 4	11⅞	10¼	9⅞	21.00	37.00
7 x 5	16⅞	10⅞	10½	21.00	37.00
7 x 6	16⅞	11⅞	11⅞	21.00	37.00
8 x 3	.....	.....	.....	27.50	48.00
8 x 4	11⅞	11	10⅞	27.50	48.00
8 x 5	.....	.....	.....	27.50	48.00
8 x 6	14⅞	12⅞	11⅞	27.50	48.00
10 x 4	14	12⅞	11½	57.00	97.00
10 x 5	.....	.....	.....	57.00	97.00
10 x 6	15½	14¼	13½	57.00	97.00
12 x 6	18	15¾	14¼	80.00	140.00
14 x 3	.....	.....	.....	105.00	175.00
14 x 4	.....	.....	.....	105.00	175.00
14 x 5	.....	.....	.....	105.00	175.00
14 x 6	19½	17¾	16⅞	105.00	175.00
14 x 12	.....	.....	.....	105.00	175.00

The inlets on reducing fittings are always the smallest openings.

Dimensions subject to a slight variation and change without notice.

### REDUCING 90° LONG TURN Y BRANCHES

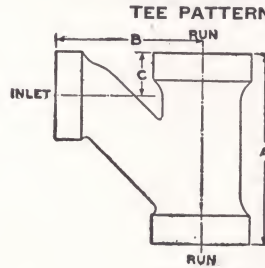


Fig. 1252B

Size Inches	DIMENSIONS, INCHES			PRICE, EACH	
	A	B	C	Black	Galv.
1¼ x 1	4¼	3½	1	.63	1.10
1½ x 1	4½	3⅞	1	.80	1.40
1½ x 1¼	5⅞	3⅞	1⅞	.80	1.40
2 x 1	.....	.....	.....	1.20	2.10
2 x 1¼	.....	.....	.....	1.20	2.10
2 x 1½	5¾	4⅞	1⅞	1.20	2.10
2½ x 1	.....	.....	.....	2.65	4.65
2½ x 1¼	.....	.....	.....	2.65	4.65
2½ x 1½	5¾	4⅞	1⅞	2.65	4.65
2½ x 2	7⅞	5¾	1⅞	2.65	4.65
3 x 1½	5⅞	5	1⅞	3.75	6.55
3 x 2	7⅞	6⅞	1⅞	3.75	6.55
3 x 2½	.....	.....	.....	3.75	6.55
4 x 1½	6⅞	5⅞	1⅞	6.60	11.55
4 x 2	7⅞	6⅞	1⅞	6.60	11.55
4 x 2½	8⅞	7⅞	2	6.60	11.55
4 x 3	10	8⅞	2⅞	6.60	11.55
5 x 1½	6⅞	6	1⅞	10.50	18.50
5 x 2	7¾	7⅞	1⅞	10.50	18.50
5 x 2½	.....	.....	.....	10.50	18.50
5 x 3	10¼	8⅞	2⅞	10.50	18.50
5 x 4	13	10⅞	2⅞	10.50	18.50
6 x 2	7⅞	7¾	1⅞	22.00	38.50
6 x 3	10⅞	9⅞	2⅞	22.00	38.50
6 x 4	13⅞	11	2⅞	22.00	38.50
6 x 5	16⅞	12⅞	3⅞	22.00	38.50
7 x 3	10⅞	9⅞	2⅞	33.00	58.00
7 x 4	13⅞	11⅞	2⅞	33.00	58.00
7 x 5	.....	.....	.....	33.00	58.00
7 x 6	.....	.....	.....	33.00	58.00
8 x 3	10⅞	10¼	2⅞	44.00	77.00
8 x 4	13⅞	12	2⅞	44.00	77.00
10 x 4	14	13	3	60.00	102.00
12 x 5	17	15½	4	85.00	150.00

The inlet of 90° long turn Y branches is tapped, pitched ¼ inch to the foot.

The inlets on reducing fittings are always the smallest openings.



## CAST IRON DRAINAGE FITTINGS

### SCREWED FOR IRON PIPE

#### LONG TURN 90° Y BRANCHES WITH 2-INCH SIDE INLETS



Fig. 8487A

#### WITH RIGHT OR LEFT SIDE INLETS

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
3	5.25	9.20	5x4	12.00	21.00
4	9.00	15.75	6x4	23.00	40.00

#### WITH INLETS BOTH SIDES

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
3	5.75	10.00	5x4	13.00	25.00
4	10.00	17.50	6x4	22.75	44.00

#### LONG TURN 90° Y BRANCHES WITH 2-INCH SIDE AND TOP INLETS



Fig. 8487B

#### WITH RIGHT OR LEFT SIDE INLET

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
4	10.00	17.50	6x4	25.00	44.00
5x4	13.00	22.75	...	.....	.....

#### WITH INLETS ON BOTH SIDES

Size In.	PRICE, EACH		Size In.	PRICE, EACH	
	Black	Galv.		Black	Galv.
4	11.00	19.25	6x4	28.00	49.00
5x4	14.50	25.50	...	.....	.....

#### 90° Y BRANCH CLOSET TEES WITH VENT ON BRANCH

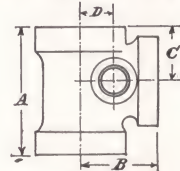


Fig. 8487C

Two-inch vent furnished on right or left side. Specify when ordering.

Size In.	DIMENSIONS, INCHES				PRICE, EACH	
	A	B	C	D	Black	Galv.
4	8 $\frac{3}{4}$	5 $\frac{3}{16}$	3 $\frac{9}{16}$	2 $\frac{5}{16}$	5.75	10.00

#### 90° Y BRANCH CLOSET TEES WITH SIDE INLET

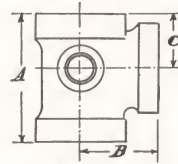


Fig. 8487D

Two-inch inlet furnished on right or left side. Specify when ordering.

Size In.	DIMENSIONS, INCHES			PRICE, EACH	
	A	B	C	Black	Galv.
4	8 $\frac{3}{4}$	5 $\frac{3}{16}$	3 $\frac{9}{16}$	5.75	10.00

#### 90° Y BRANCH CLOSET TEES WITH 45° SIDE INLET

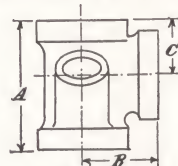


Fig. 8487E

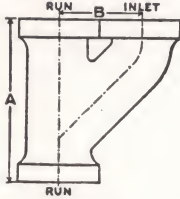
Two-inch inlet furnished on right or left side. Specify when ordering.

Size In.	DIMENSIONS, INCHES			PRICE, EACH	
	A	B	C	Black	Galv.
4	8 $\frac{3}{4}$	5 $\frac{3}{16}$	3 $\frac{9}{16}$	6.35	11.00

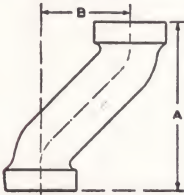
Dimensions subject to a slight variation and change without notice

**CAST IRON DRAINAGE FITTINGS**

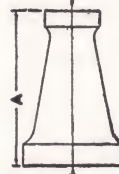
SCREWED FOR WROUGHT PIPE

**SPECIAL UPRIGHT Y BRANCHES****Fig. 1268A**

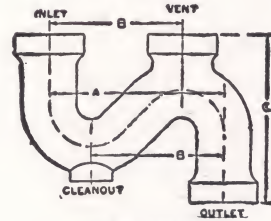
Size Inches	DIMENSIONS, INCHES		PRICE, EACH	
	A	B	Black	Galv.
2 x 1½	5 7/8	2 15/16	2.90	5.10
2½ x 1½	5 15/16	3 5/16	4.50	7.75
2½ x 2	7 1/8	3 5/8	4.50	7.75
3 x 2	9 1/16	4 5/8	6.00	10.50
3 x 3	9 1/16	4 5/8	5.50	9.75
4 x 2	7 1/8	4 9/16	8.75	15.25
4 x 4	11 3/4	5 15/16	8.00	14.00

**OFFSETS****Fig. 1268B**

Size Inchds	Offset B, In.	Length A, In.	PRICE, EACH	
			Black	Galv.
2	4	7 1/2	2.15	3.75
2	6	9 1/2	2.40	4.20
2	8	11 1/2	2.60	4.55
2	10	13 1/2	2.85	5.00
3	4	8 3/4	3.35	5.85
3	6	10 3/4	4.00	7.00
3	8	12 3/4	4.75	8.30
3	10	14 3/4	5.50	9.65
4	4	9 3/4	5.00	8.75
4	6	11 3/4	5.75	10.00
4	8	13 3/4	6.50	11.35
4	10	15 3/4	7.50	13.15
4	12	17 3/4	8.50	15.00
5	6	12 5/8	9.00	15.75
5	8	14 5/8	10.00	17.50
5	10	16 5/8	11.00	19.25
5	12	18 5/8	12.00	21.00
6	6	13 5/8	12.50	22.00
6	8	15 5/8	13.50	23.50
6	10	17 5/8	14.50	25.50
6	12	19 5/8	15.50	27.00

**INCREASERS****Fig. 1268C**

Size Inches	Dimensions, A Inches	PRICE, EACH	
		Black	Galv.
2 x 2½	9	1.75	3.00
2½ x 2	9	2.00	3.50
3 x 2	9	2.50	4.40
4 x 2	9	3.75	6.55
4 x 3	9	3.75	6.55
5 x 2	9	5.50	9.65
5 x 3	9	5.50	9.65
5 x 4	9	5.50	9.65
6 x 4	9	6.50	11.35
6 x 5	9	6.50	11.35
7 x 4	.	12.00	20.00
7 x 6	.	12.00	20.00
8 x 4	9	15.00	26.25
8 x 6	9	15.00	26.25
10 x 8	.	20.00	35.00
12 x 10	.	40.00	70.00
14 x 6	.	55.00	95.00
14 x 8	.	55.00	95.00
14 x 12	.	55.00	95.00

**S TRAPS****Fig. 1268D**

Size Inches	DIMEN., INCHES			Size Cleanout Inches	PRICE, EACH	
	A	B	C		Black	Galv.
2	8 1/4	6 1/4	8	1	4.00	7.00
3	10 3/4	8 1/16	11 1/4	1 1/4	9.25	16.00
4	14 1/8	10 5/8	13 3/4	2	14.00	24.00
5	16 3/4	12 9/16	16 7/8	2	21.00	37.00
6	20 1/4	15 3/16	19 3/4	2	36.00	63.00

The vent for the 2-inch size is 2 inches; 3-inch size, 3 inches; 4, 5 and 6-inch sizes, 4 inches.

Dimensions subject to a slight variation and change without notice.

## CAST IRON DRAINAGE FITTINGS SCREWED FOR WROUGHT PIPE

### HALF S TRAPS

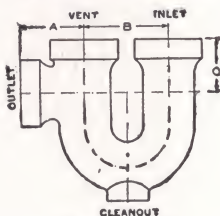


Fig. 8488A

Size Inches	PRICE, EACH	
	Black	Galvanized
1 1/4	1.55	2.70
1 1/2	1.70	3.00
2	2.20	3.85
3	5.00	8.75
4	10.00	17.50
5	21.50	37.50
6	32.50	57.00
7	40.00	70.00
8	55.00	95.00

Size	DIMENSIONS, INCHES				
	A	B	C	Vent	Cleanout
1 1/4	2 5/16	3 1/8	2	1 1/4	3/4
1 1/2	2 1/2	3 3/8	2 1/4	1 1/2	1
2	3 1/16	4	2 9/16	2	1
3	4 3/16	5 3/8	3 1/2	3	1 1/4
4	5 1/8	7	4 3/16	4	2
5	6 1/16	8 3/8	4 3/4	4	2
6	6 9/16	10 1/8	5 7/16	4	2
7	7 3/4	11 1/4	6 1/8	5	2
8	8 15/16	12 3/8	6 3/4	6	3

### P TRAPS

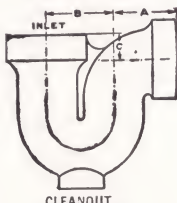


Fig. 8488B

Size In.	DIMENSIONS, INCHES			Cleanout In.	PRICE, EACH	
	A	B	C		Black	Galv.
1 1/4	1 5/16	2	3/4	3/4	1.45	2.55
1 1/2	2 1/8	2 1/4	7/8	1	1.55	2.70
2	2 9/16	2 3/4	7/8	1	2.00	3.50
3	3 3/8	3 3/4	1 3/16	1 1/4	4.70	8.25

Dimensions subject to a slight variation and change without notice

### RUNNING TRAPS

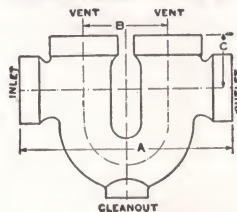


Fig. 8488C

Size Inches	PRICE, EACH		Size Inches	PRICE, EACH	
	Black	Galv.		Black	Galv.
1 1/4	2.40	4.20	6	33.50	58.50
1 1/2	2.70	4.70	7	50.00	87.50
2	3.30	5.75	8	65.00	115.00
3	5.50	9.50	10	115.00	200.00
4	9.75	17.00	12	180.00	300.00
5	24.50	43.00	14	300.00	500.00

Size Inches	DIMENSIONS, INCHES				
	A	B	C	Vents	Cleanout
1 1/4	7 3/4	3 1/8	2	1 1/4	3/4
1 1/2	8 3/8	3 3/8	2 1/4	1 1/2	1
2	10 1/8	4	2 9/16	2	1
3	13 3/4	5 3/8	3 1/2	3	1
4	17 1/4	7	4 3/16	4	2
5	20 1/2	8 3/8	4 3/4	4	2
6	23 1/4	10 1/8	5 7/16	4	2
7	26 3/4	11 1/4	6 1/8	5	2 1/4
8	30 1/4	12 3/8	6 3/4	6	3
10	36 1/4	14 3/4	8 1/4	6	3
12	41 7/8	17	9 1/2	6	3
14	45	18 1/2	10 1/2	8	4

The inlet and outlet of running traps are tapped, pitched 1/4 inch to the foot

### CAST IRON BATH TRAPS

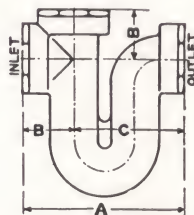


Fig. 8488D

Inlet and outlet tapped for 1 1/2-inch I. P. and nickel-plated brass cleanout cover tapped 1 1/2-inch female, I. P.

Size In.	DIMENSIONS, INCHES			PRICE, EACH	
	A	B	C	Black	Galv.
1 1/2	5 5/8	1 3/4	3 7/8	2.00	2.50



## CAST IRON DRAINAGE FITTINGS

SCREWED FOR WROUGHT PIPE

### CLOSET FLANGES, FEMALE FOR FLAT GASKET



Fig. 1283A

Size.....	inches	4
Diameter of Flange.....	"	7
Price, Malleable Iron.....	each	1.35
" Mal. Iron, Galv.....	"	2.35
" Brass.....	"	7.00

### CLOSET FLANGES, MALE FOR FLAT GASKET



Fig. 1283B

Size.....	inches	4
Diameter of Flange.....	"	7
Price, Brass.....	each	7.00

### CLOSET FLANGES, MALE FOR RING GASKET



Fig. 1283C

Size.....	inches	4
Diameter of Flange.....	"	7
Price, Brass.....	each	7.00

### CLOSET FLANGES, FEMALE FOR RING GASKET



Fig. 1283D

Size.....	inches	4
Diameter of Flange.....	"	7
Price, Malleable Iron.....	each	1.35
" Mal. Iron, Galv.....	"	2.35
" Brass.....	"	7.00

### TUCKER CONNECTIONS

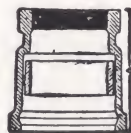


Fig. 1283E

Size Inches	Dim. A Inches	PRICE, EACH—	
		Black	Galvanized
2	4 1/2	.80	1.40
3	4 3/4	2.00	3.50
4	7	3.25	5.70
5	7	6.00	10.50
6	7	8.75	15.25
8	7	21.00	37.00

The inlets on reducing fittings are always the smallest openings.

### HUB CONNECTIONS

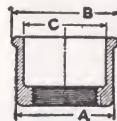


Fig. 1283F

Size Inches	DIMENSIONS, IN.			PRICE, EACH—	
	A	B	C	Black	Galvanized
2	3 1/2	3 3/16	3	1.15	2.00
3	4 9/16	4 5/16	4 1/8	1.20	2.10
4	5 3/8	6	5 1/8	1.50	2.60
5	6 11/16	7 1/16	6	2.00	3.50
6	7 3/4	8 3/16	7 1/8	4.25	7.40

### BRASS SOLDER NIPPLES

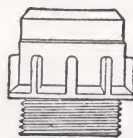


Fig. 1283G

Size Inches	Price Each	Size Inches	Price Each
1	.80	3	2.75
1 1/4	.90	4	4.00
1 1/2	1.05	5	9.00
2	1.50	..	....

Dimensions subject to a slight variation and change without notice.

CAST IRON DRUM TRAPS AND FERRULES

CAST IRON DRUM TRAPS  
WITH NICKEL-PLATED FLANGED TRAP  
SCREW

No. 1



Fig. 8645A

No. 1 trap is tapped 1½ inches on side and bottom.

Size.....inches	4x5
Price, Painted.....each	2.25
" Galvanized....."	3.25

No. 2



Fig. 8645B

No. 2 trap is furnished with two 1½ inch openings.

Size.....inches	4x8
Price, Painted.....each	2.50
" Galvanized....."	4.00

Covers for above are threaded for 3-inch iron pipe, so that after roughing in, plumber can use 3-inch cast iron plugs for testing purposes.

IRON BODY TRAP SCREW FERRULES



Fig. 8645C

Size Inches	Price Each	Size Inches	Price Each
2	.30	5	.90
3	.40	6	1.20
4	.50	..	....

CAST IRON DRUM TRAPS

WITH NICKEL-PLATED FLANGED TRAP  
SCREW

No. 3



Fig. 8645D

No. 3A



Fig. 8645E

No. 3 trap is furnished with three 1½-inch openings, one near top and two near bottom.

No. 3A trap is furnished with three 1½-inch openings, two near top and one at bottom.

No.....	3	3A
Size.....inches	4x8	4x8
Price, Painted.....each	2.75	2.75
" Galvanized....."	4.25	4.25

No. 4



Fig. 8645F

No. 4 trap is furnished with four 1½-inch openings.

Size.....inches	4x8
Price, Painted.....each	3.00
" Galvanized....."	4.50

IRON DRIVE FERRULES

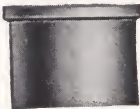


Fig. 8645G

Size.....inches	2	3	4
Price.....each	.12	.18	.20

## PALMER BACK WATER TRAPS, ETC.

### PALMER BACK WATER TRAPS

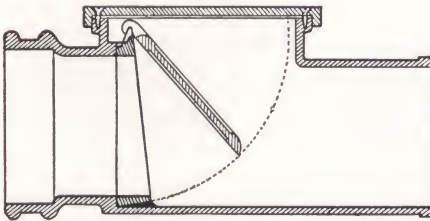
#### IRON BODY



Fig. 8648A

Made of cast iron, with hub and spigot connection, in sizes to fit regular cast iron soil pipe. Provided with accessible handhole or cleanout, with cover bolted on, with heavy brass screws. Seat and valve are made of non-corrosive white metal, and are securely fitted to inside of iron body. The valve is a swinging gate, swinging into handhole opening, thus allowing a free unobstructed round opening for passage of sewage, the full size of pipe yet closing tightly and preventing ingress of water through backflow of pressure.

#### Sectional



Size Inches	Price Each	Size Inches	Price Each
2	6.00	6	10.00
3	6.50	8	15.00
4	7.50	10	30.00
5	9.00	12	40.00

Iron body traps with brass valves made to order. Prices on application.

### PALMER BACK WATER VALVES



Fig. 8648B

Made entirely of non-corrosive white metal and consists of a flanged seat with swinging gate. The flange on seat is made in sizes to fit the hub openings of regular glazed tile pipe with opening through same, and swinging gate corresponding to bore of pipe. It is intended to be fitted between two lengths of pipe, and when cemented in place forms a positive back

water valve yet offers no resistance or obstruction to flow of sewage.

Size Inches	Price Each	Size Inches	Price Each
2	1.00	8	3.20
3	1.20	9	4.00
4	1.60	10	15.00
5	2.00	12	25.00
6	2.40	15	40.00

Brass valves made to order. Prices on application.

### SOIL PIPE TESTING PLUGS



Fig. 8648C

Size Inches	Price Each	Size Inches	Price Each
2	1.00	5	2.00
3	1.25	6	2.50
4	1.50	..	...

### TESTING PLUG RUBBERS

Size Inches	Price Each	Size Inches	Price Each
2	.25	5	.90
3	.50	6	1.20
4	.70	..	...

Extra quality rubber rings, will fit standard or extra heavy pipe.



## CAST IRON FLANGED FITTINGS

### STANDARD AND EXTRA HEAVY

Standard and extra heavy reducing elbows carry same dimensions center to face as regular elbows of largest straight size.

Standard and extra heavy tees, crosses and laterals, reducing on run only, carry same dimensions face to face as largest straight size.

Where long radius fittings are specified, it has reference only to Elbows which are made in two center to face dimensions and to be known as Elbows and Long Radius Elbows, the latter being used only when so specified.

All standard weight fittings are recommended for 125 pounds working pressure and extra heavy fittings for 250 pounds working pressure.

All extra heavy fittings and flanges have a raised surface of  $\frac{1}{16}$  inch inside of bolt holes for gaskets.

Standard weight fittings and flanges are plain faced.

Bolt holes are  $\frac{1}{8}$  inch larger in diameter than bolts. Bolt holes to straddle center line.

Size of all fittings scheduled indicates inside diameter of ports.

The face to face dimensions of reducers, either straight or eccentric, for all pressures shall be the same face to face as given in table of dimensions.

Square head bolts with hexagonal nuts are recommended.

Double branch elbows, whether straight or reducing, carry same dimensions center to face and face to face as regular straight size elbows and tees.

Side outlet elbows and side outlet tees, whether straight or reducing sizes, carry the same dimensions center to face and face to face as regular tees having same reductions.

Bull head tees or tees increasing on outlet have same center to face and face to face dimensions as a straight fitting of the size of the outlet.

Tees and crosses 16 inches and down, reducing on the outlet, use the same dimensions as straight sizes of the larger port.

Double sweep tees are not made reducing on the run.

Bolt holes will not be spot faced unless so ordered, for which an extra charge of 10¢ list will be made.

# STANDARD FLANGED FITTINGS

FOR STEAM WORKING PRESSURES UP TO 125 POUNDS

## ELBOWS

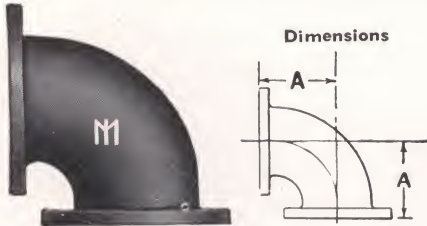


Fig. 24A

New Standard effective Jan. 1, 1915.  
Recommended by the American Society  
of Mechanical Engineers, National Asso-  
ciation of Steam and Hot Water Fitters  
and Manufacturers' Committee.

## 45° ELBOWS

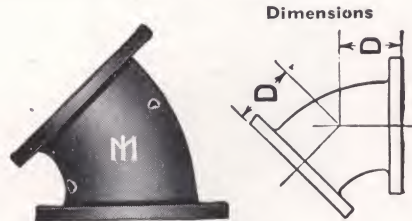


Fig. 24B

New Standard, effective Jan. 1, 1915.  
Recommended by the American Society  
of Mechanical Engineers, National Asso-  
ciation of Steam and Hot Water Fitters  
and Manufacturers' Committee.

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH	
			With Faced Flanges	*With Drilled Flanges
1 1/4	4 1/2	3 3/4	3.00	3.60
1 1/2	5	4	3.00	3.60
2	6	4 1/2	3.00	3.60
2 1/2	7	5	3.15	3.75
3	7 1/2	5 1/2	3.45	4.15
3 1/2	8 1/2	6	4.05	4.90
4	9	6 1/2	4.50	5.50
4 1/2	9 1/4	7	5.50	6.50
5	10	7 1/2	6.25	7.25
6	11	8	7.60	8.90
7	12 1/2	8 1/2	10.50	12.00
8	13 1/2	9	12.00	13.60
9	15	10	17.00	19.25
10	16	11	19.00	21.70
12	19	12	28.00	31.00
14	21	14	41.50	45.25
15	22 1/4	14 1/2	47.00	51.50
16	23 1/2	15	54.50	59.50
18	25	16 1/2	71.00	77.00
20	27 1/2	18	90.00	97.00
22	29 1/2	20	113.00	122.00
24	32	22	140.00	150.00

\*Flanged faced and drilled.

Bolt hole will be drilled 1/8 inch larger  
than diameter of bolts. All standard  
weight fittings and flanges have plain  
faces.

Furnished faced only, unless otherwise  
ordered.

Larger sizes made to order. Prices on  
application.

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH	
			With Faced Flanges	*With Drilled Flanges
1 1/4	4 1/2	2	3.30	3.90
1 1/2	5	2 1/4	3.30	3.90
2	6	2 1/2	3.30	3.90
2 1/2	7	3	3.50	4.10
3	7 1/2	3	3.80	4.50
3 1/2	8 1/2	3 1/2	4.50	5.35
4	9	4	5.00	6.00
4 1/2	9 1/4	4	6.00	7.00
5	10	4 1/2	6.90	7.90
6	11	5	8.35	9.65
7	12 1/2	5 1/2	11.00	12.50
8	13 1/2	5 1/2	12.60	14.20
9	15	6	17.75	20.00
10	16	6 1/2	20.00	22.70
12	19	7 1/2	29.50	32.50
14	21	7 1/2	41.50	45.25
15	22 1/4	8	47.00	51.50
16	23 1/2	8	54.50	59.50
18	25	8 1/2	71.00	77.00
20	27 1/2	9 1/2	90.00	97.00
22	29 1/2	10	113.00	122.00
24	32	11	140.00	150.00

\*Flanges faced and drilled.

Bolt holes will be drilled 1/8 inch larger  
than diameter of bolts. All standard  
weight fittings and flanges have plain  
faces.

Size of all fittings scheduled indicates  
inside diameter of ports.

Furnished faced only, unless otherwise  
ordered.

Larger sizes made to order. Prices on  
application.

## STANDARD FLANGED FITTINGS

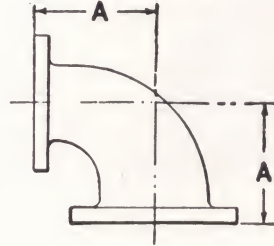
FOR STEAM WORKING PRESSURES UP TO 125 POUNDS

### REDUCING TAPER ELBOWS



Fig. 725A

#### DIMENSIONS



New Standard, effective Jan. 1, 1915.  
Recommended by the American Society  
of Mechanical Engineers, National Association  
of Steam and Hot Water Fitters  
and Manufacturers' Committee.

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH	
			With Faced Flanges	*Drilled Flanges
3 x 1½	7½x 5	5½	6.90	7.60
3 x 2	7½x 6	5½	6.90	7.60
3 x 2½	7½x 7	5½	6.90	7.60
3½x 2	8½x 6	6	8.10	8.95
3½x 2½	8½x 7	6	8.10	8.95
3½x 3	8½x 7½	6	8.10	8.95
4 x 2	9 x 6	6½	9.00	10.00
4 x 2½	9 x 7	6½	9.00	10.00
4 x 3	9 x 7½	6½	9.00	10.00
4 x 3½	9 x 8½	6½	9.00	10.00
4½x 2½	9½x 7	7	11.00	12.00
4½x 3½	9½x 8½	7	11.00	12.00
4½x 4	9½x 9	7	11.00	12.00
5 x 2½	10 x 7	7½	12.50	13.50
5 x 3	10 x 7½	7½	12.50	13.50
5 x 4	10 x 9	7½	12.50	13.50
6 x 2½	11 x 7	8	15.25	16.55
6 x 3	11 x 7½	8	15.25	16.55
6 x 3½	11 x 8½	8	15.25	16.55
6 x 4	11 x 9	8	15.25	16.55
6 x 5	11 x 10	8	15.25	16.55
7 x 5	12½x 10	8½	21.00	22.50
7 x 6	12½x 11	8½	21.00	22.50
8 x 3½	13½x 8½	9	24.00	25.60
8 x 4	13½x 9	9	24.00	25.60
8 x 5	13½x 10	9	24.00	25.60
8 x 6	13½x 11	9	24.00	25.60
8 x 7	13½x 12½	9	24.00	25.60
9 x 6	15 x 11	10	34.00	36.25
9 x 8	15 x 13½	10	34.00	36.25

\*Flanges faced and drilled.

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH	
			With Faced Flanges	*Drilled Flanges
10x 4½	16 x 9¼	11	38.00	40.70
10x 5	16 x 10	11	38.00	40.70
10x 6	16 x 11	11	38.00	40.70
10x 7	16 x 12½	11	38.00	40.70
10x 8	16 x 13½	11	38.00	40.70
10x 9	16 x 15	11	38.00	40.70
12x 6	19 x 11	12	56.00	59.00
12x 7	19 x 12½	12	56.00	59.00
12x 8	19 x 13½	12	56.00	59.00
12x 10	19 x 16	12	56.00	59.00
14x 10	21 x 16	14	70.00	73.75
14x 12	21 x 19	14	70.00	73.75
15x 10	22¼x 16	14½	80.00	84.50
15x 12	22¼x 19	14½	80.00	84.50
16x 12	23½x 19	15	90.00	95.00
16x 14	23½x 21	15	90.00	95.00
16x 15	23½x 22¼	15	90.00	95.00
18x 15	25 x 22¼	16½	105.00	111.00
18x 16	25 x 23½	16½	105.00	111.00
20x 14	27½x 21	18	120.00	127.00
20x 16	27½ x 23½	18	120.00	127.00
20x 18	27½x 25	18	120.00	127.00

\*Flanges faced and drilled.

Standard Reducing Elbows carry the same dimensions, center to face, as regular elbows of largest straight size. Bolt holes will be drilled ⅛ inch larger than diameter of bolts.

All standard weight fittings and flanges have plain faces.

Size of all fittings scheduled indicates inside diameter of ports.

Elbows not listed above, made to order at a special price. Flanged fittings will be furnished faced only, unless otherwise specified.



# STANDARD FLANGED FITTINGS

FOR WORKING PRESSURES UP TO 125 POUNDS

## LONG RADIUS ELBOWS

## BASE ELBOWS, ROUND BASE



Fig. 8608A

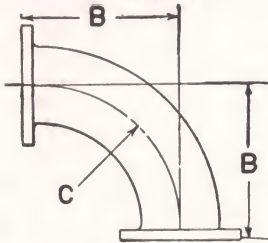
New standard effective Jan. 1, 1915.

Recommended by the American Society of Mechanical Engineers, National Association of Steam and Hot Water Fitters and Manufacturers' Committee.



Fig. 8608B

### Dimensions



Size Inches	Diam. of Flanges Inches	Center to Face, B Inches	Radius C Inches	PRICE, EACH With Faced Flanges	With *Drilled Flanges
2	6	6½	5¼	5.00	5.90
2½	7	7	5⅝	5.25	6.15
3	7½	7¾	6¼	5.75	6.85
3½	8½	8½	6⅞	6.75	8.00
4	9	9	7⅜	7.50	9.00
4½	9¼	9½	7¾	9.25	10.75
5	10	10¼	8½	10.50	12.00
6	11	11½	9⅝	12.65	14.60
7	12½	12¾	10⅞	17.50	19.75
8	13½	14	12	20.00	22.40
9	15	15¼	13	28.50	31.85
10	16	16½	14⅞	31.50	35.50
12	19	19	16½	46.50	51.00
14	21	21½	18⅞	69.00	74.50
15	22¼	22¾	20	78.00	84.75
16	23½	24	21¼	91.00	98.50
18	25	26½	23⅝	118.00	127.00
20	27½	29	26	150.00	160.00

\*Flanges faced and drilled.

Long radius elbows of different dimensions from above, furnished on order at a special price.

Furnished faced only, unless otherwise ordered.

Size Inches	PRICE, EACH Faced Except Base Flange	Faced and Drilled Except Base Flange	Facing and Drilling Base Flange
4	9.00	10.00	3.00
4½	11.00	12.00	3.00
5	12.50	13.50	3.50
6	15.25	16.55	3.50
7	21.00	22.50	3.50
8	24.00	25.60	5.00
9	34.00	36.25	5.00
10	38.00	40.70	5.00
12	56.00	59.00	7.50
14	70.00	73.75	7.50
15	80.00	84.50	7.50
16	90.00	95.00	7.50
18	105.00	111.00	12.00

Base Elbows are furnished faced only, as quoted, unless otherwise ordered.

Prices of Base Elbows larger than 18-inch, quoted on application.

Size Inches	Diam. of *Flanges Inches	Center to Face Inches	Diam. Base †Flange Inches	Center to Face Base Flange
4	9	6½	6	6½
4½	9¼	7	6	6¾
5	10	7½	7	7
6	11	8	7	7½
7	12½	8½	7	8¼
8	13½	9	9	8¾
9	15	10	9	9½
10	16	11	9	10
12	19	12	11	10½
14	21	14	11	13½
15	22¼	14½	11	14
16	23½	15	11	14¾
18	25	16½	13½	15½

\*Port openings only, not base flange.

†The measurement across the flat edges of square base flange is the same as the diameter of the round base flange.

## STANDARD FLANGED FITTINGS

FOR STEAM WORKING PRESSURES UP TO 125 POUNDS

### SIDE OUTLET ELBOWS

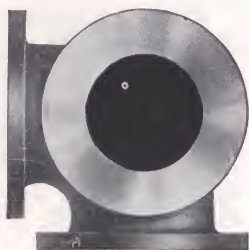


Fig. 8610A

Size In.	Diam. Flanges In.	Center to Face In.	PRICE, EACH	
			With Faced Flanges	With Faced and Drilled Flanges
4	9	6½	26.50	28.00
5	10	7½	28.50	30.00
6	11	8	33.00	35.00
7	12½	8½	40.25	42.50
8	13½	9	47.50	50.00
10	16	11	76.00	80.00
12	19	12	100.50	105.00
14	21	14	129.50	135.00
16	23½	15	152.50	160.00

### DOUBLE BRANCH ELBOWS



Fig. 8610B

Size In.	Diam. Flanges In.	Center to Face In.	PRICE, EACH	
			With Faced Flanges	With Faced and Drilled Flanges
4	9	6½	28.50	30.00
5	10	7½	36.00	37.50
6	11	8	38.00	40.00
7	12½	8½	42.75	45.00
8	13½	9	47.50	50.00
10	16	11	66.00	70.00
12	19	12	90.50	95.00
14	21	14	119.50	125.00
16	23½	15	142.50	150.00

Furnished faced only, unless otherwise ordered.

Larger sizes made to order. Prices on application.

### REDUCING SIDE OUTLET ELBOWS



Fig. 8610C

Size In.	Diam. Flanges In.	Center to Face In.	PRICE, EACH	
			With Faced Flanges	With Faced and Drilled Flanges
4	9	6½	29.50	31.00
5	10	7½	31.50	33.00
6	11	8	36.00	38.00
7	12½	8½	44.75	47.00
8	13½	9	52.50	55.00
10	16	11	84.00	88.00
12	19	12	110.50	115.00
14	21	14	144.50	150.00
16	23½	15	167.50	175.00

### REDUCING DOUBLE BRANCH ELBOWS



Fig. 8610D

Size In.	Diam. Flanges In.	Center to Face In.	PRICE, EACH	
			With Faced Flanges	With Faced and Drilled Flanges
4	9	6½	31.50	33.00
5	10	7½	39.50	41.00
6	11	8	42.00	44.00
7	12½	8½	47.75	50.00
8	13½	9	52.50	55.00
10	16	11	73.50	77.50
12	19	12	100.50	105.00
14	21	14	132.50	138.00
16	23½	15	157.50	165.00

Furnished faced only, unless otherwise ordered.

Larger sizes made to order. Prices on application.

# STANDARD FLANGED FITTINGS

FOR STEAM WORKING PRESSURES UP TO 125 POUNDS

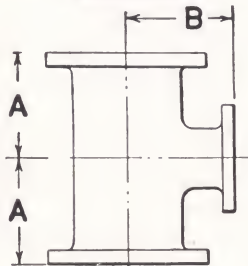
## TEES

STRAIGHT



Fig. 25A

DIMENSIONS



REDUCING



Fig. 25B

New standard, effective Jan. 1, 1915.  
Recommended by the American Society  
of Mechanical Engineers, National Association  
of Steam and Hot Water Fitters  
and Manufacturers' Committee.

## STRAIGHT SIZES

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH With Faced Flanges	*Drilled Flanges
1 1/4	4 1/2	3 3/4	4.35	5.25
1 1/2	5	4	4.35	5.25
2	6	4 1/2	4.35	5.25
2 1/2	7	5	4.55	5.45
3	7 1/2	5 1/2	5.00	6.10
3 1/2	8 1/2	6	5.85	7.10
4	9	6 1/2	6.50	8.00
4 1/2	9 1/4	7	8.00	9.50
5	10	7 1/2	9.10	10.60
6	11	8	11.00	12.95
7	12 1/2	8 1/2	15.25	17.50
8	13 1/2	9	17.40	19.80
9	15	10	24.65	28.00
10	16	11	27.50	31.50
12	19	12	40.50	45.00
14	21	14	60.00	65.50
15	22 1/4	14 1/2	68.00	74.75
16	23 1/2	15	79.00	86.50
18	25	16 1/2	103.00	112.00
20	27 1/2	18	130.00	140.00
22	29 1/2	20	164.00	177.00
24	32	22	203.00	218.00

\*Flanges faced and drilled.

All reducing tees, 16 inches and smaller, take the same center to face dimensions as straight size tees. All tees reducing on the run only, take the same dimensions center to face, as the largest straight size. Tees, sizes 18 inches and larger, and reducing on the outlet, are made in two lengths, depending on the size of outlet.

REDUCING SIZES  
REDUCING IN RUN OR BRANCH

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH With Faced Flanges	*Drilled Flanges
1 1/2	5	4	5.00	5.90
2	6	4 1/2	5.00	5.90
2 1/2	7	5	5.25	6.15
3	7 1/2	5 1/2	5.75	6.85
3 1/2	8 1/2	6	6.75	8.00
4	9	6 1/2	7.50	9.00
4 1/2	9 1/4	7	9.25	10.75
5	10	7 1/2	10.50	12.00
6	11	8	12.65	14.68
7	12 1/2	8 1/2	17.50	19.75
8	13 1/2	9	20.00	22.40
9	15	10	28.50	31.85
10	16	11	31.50	35.50
12	19	12	46.50	51.00
14	21	14	69.00	74.50
15	22 1/4	14 1/2	78.00	84.75
16	23 1/2	15	91.00	98.50
18	25	16 1/2	118.00	127.00
20	27 1/2	18	150.00	160.00
22	29 1/2	20	189.00	202.00
24	32	22	233.00	248.00

\*Flanges faced and drilled.

For variations from foregoing dimensions in 18-inch size and larger with small outlet, see standard dimension table.

Bullheads or tees having outlet larger than the run, will be the same length center to face of all openings as a tee with all openings of the size of the outlet. For example:

A 12x12x16 inch tee will be governed by the dimensions of the 16-inch Zone Body Tee (upper table), namely, 15 inches center to face of all openings and 30 inches face to face.

Furnished faced only, unless otherwise specified. Larger sizes made to order. Prices upon application.



## STANDARD FLANGED FITTINGS

FOR STEAM WORKING PRESSURES UP TO 125 POUNDS

### SIDE OUTLET TEES

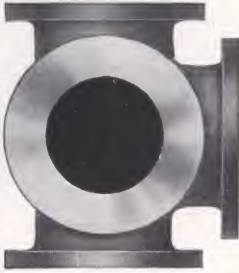


Fig. 8612A

Size In.	Diam. Flanges In.	Center to Face In.	PRICE, EACH	
			With Faced Flanges	With Faced and Drilled Flanges
4	9	7½	31.00	33.00
5	10	8	35.00	37.00
6	11	8½	42.25	45.00
7	12½	9	49.50	52.50
8	13½	11	56.75	60.00
10	16	12	84.50	90.00
12	19	14	114.00	120.00
14	21	14½	142.50	150.00
16	23½	15	170.00	180.00

Furnished faced only, unless otherwise specified.

Larger sizes made to order. Prices on application.

When ordering side outlet tees it is requested that a sketch be submitted showing exact size of all openings.

### REDUCING SIDE OUTLET TEES

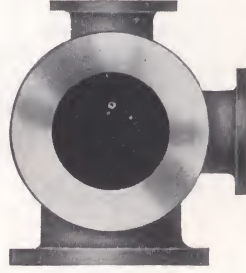


Fig. 8612C

Size In.	Diam. Flanges In.	Center to Face In.	PRICE, EACH	
			With Faced Flanges	With Faced and Drilled Flanges
4	9	7½	34.00	36.00
5	10	8	39.00	41.00
6	11	8½	47.25	50.00
7	12½	9	55.00	58.00
8	13½	11	62.75	66.00
10	16	12	94.50	100.00
12	19	14	126.00	132.00
14	21	14½	157.50	165.00
16	23½	15	190.00	200.00

Furnished faced only, unless otherwise specified.

Larger sizes made to order. Prices upon application.

### BASE TEES



Fig. 8612B

Made to order only.

Dimension drawings should accompany orders or requests for prices.

Prices upon application.

### Y BRANCHES



Fig. 8612D

Made to order only.

Dimension drawings should accompany orders or requests for prices.

Prices upon application.

# STANDARD FLANGED FITTINGS

FOR STEAM WORKING PRESSURES UP TO 125 POUNDS

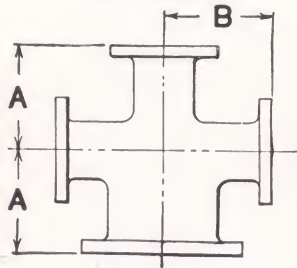
## CROSSES

STRAIGHT



Fig. 28A

DIMENSIONS



REDUCING

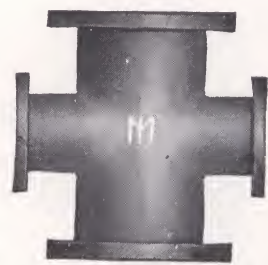


Fig. 28B

New Standard effective Jan. 1, 1915 recommended by the American Society of Mechanical Engineers, National Association of Steam and Hot Water Fitters and Manufacturers' Committee.

### STRAIGHT SIZES

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH With Faced Flanges	With *Drilled Flanges
1 1/4	4 1/2	3 3/4	6.75	7.95
1 1/2	5	4	6.75	7.95
2	6	4 1/2	6.75	7.95
2 1/2	7	5	6.95	8.15
3	7 1/2	5 1/2	7.65	9.05
3 1/2	8 1/2	6	9.00	10.70
4	9	6 1/2	10.00	12.00
4 1/2	9 1/4	7	12.00	14.00
5	10	7 1/2	13.75	15.75
6	11	8	16.75	19.25
7	12 1/2	8 1/2	23.00	26.00
8	13 1/2	9	26.50	29.75
9	15	10	37.50	42.00
10	16	11	42.00	47.50
12	19	12	61.50	67.50
14	21	14	91.00	98.50
15	22 1/4	14 1/2	103.00	112.00
16	23 1/2	15	120.00	130.00
18	25	16 1/2	157.00	169.00
20	27 1/2	18	198.00	212.00
22	29 1/2	20	248.00	266.00
24	32	22	310.00	330.00

\*Flanges faced and drilled.

All reducing crosses, 16 inches and smaller, take the same center to face dimensions as straight size crosses. All crosses reducing on the run only, take the same dimensions, center to face, as the largest straight size.

Furnished faced only, unless otherwise specified on order.

### REDUCING SIZES

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH With Faced Flanges	With *Drilled Flanges
1 1/4	4 1/2	3 3/4	.....	.....
1 1/2	5	4	.....	.....
2	6	4 1/2	7.75	8.95
2 1/2	7	5	8.00	9.20
3	7 1/2	5 1/2	8.75	10.15
3 1/2	8 1/2	6	10.35	12.05
4	9	6 1/2	11.50	13.50
4 1/2	9 1/4	7	13.75	15.75
5	10	7 1/2	15.75	17.75
6	11	8	19.25	21.75
7	12 1/2	8 1/2	26.50	29.50
8	13 1/2	9	30.50	33.75
9	15	10	43.00	47.50
10	16	11	48.00	53.50
12	19	12	71.00	77.00
14	21	14	105.00	112.50
15	22 1/4	14 1/2	118.00	127.00
16	23 1/2	15	138.00	148.00
18	25	16 1/2	180.00	192.00
20	27 1/2	18	228.00	242.00
22	29 1/2	20	285.00	303.00
24	32	22	355.00	375.00

\*Flanges faced and drilled crosses.

Sizes 18 inches, and larger, reducing on the outlet, are made in two lengths, depending on the size of the outlet.

Bolt holes are drilled 1/8 inch larger in diameter than the diameter of the bolts.

Sizes of all fittings scheduled, indicates the inside diameter of parts.

Furnished faced only, unless otherwise specified or order.

Larger sizes furnished to order. Prices upon application.

# STANDARD FLANGED FITTINGS

FOR STEAM WORKING PRESSURES UP TO 125 POUNDS

## Y BRANCHES OR LATERALS



Fig. 29A

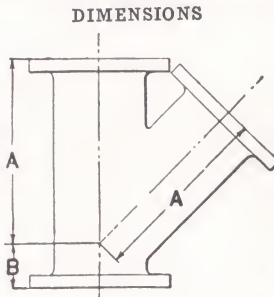


Fig. 29B

New Standard effective Jan. 1, 1915.  
Recommended by the American Society  
of Mechanical Engineers, National Association  
of Steam and Hotwater Fitters  
and manufacturers' Committee.

### REDUCING SIZES

#### REDUCING IN RUN OR BRANCH

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH With Faced Flanges	With *Drilled Flanges
2½	7	9½	8.00	9.20
3	7½	10	8.75	10.15
3½	8½	11½	10.35	12.05
4	9	12	11.50	13.50
4½	9¼	12½	13.75	15.75
5	10	13½	15.75	17.75
6	11	14½	19.25	21.75
7	12½	16½	26.50	29.50
8	13½	17½	30.50	33.75
9	15	19½	43.00	47.50
10	16	20½	48.00	53.50
12	19	24½	71.00	77.00
14	21	27	105.00	112.00
15	22¼	28½	118.00	127.00
16	23½	30	138.00	148.00
18	25	32	180.00	192.00
20	27½	35	228.00	242.00
22	29½	37½	285.00	303.00
24	32	40½	355.00	375.00

\*Flanges faced and drilled.

All reducing "Y" or laterals, 16 inches and smaller, take the same center to face dimensions as the same sizes in straight size fittings.

Bolt holes are drilled ⅛ inch larger in diameter than the diameter, of the bolts.

Sizes of all fittings scheduled, indicates the inside diameter of ports.

Furnished faced only, unless otherwise specified on order. Larger sizes furnished to order. Prices on application.

### STRAIGHT SIZES

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH With Faced Flanges	With *Drilled Flanges
2	6	8	6.75	7.95
2½	7	9½	6.95	8.15
3	7½	10	7.65	9.05
3½	8½	11½	9.00	10.70
4	9	12	10.00	12.00
4½	9¼	12½	12.00	14.00
5	10	13½	13.75	15.75
6	11	14½	16.75	19.25
7	12½	16½	23.00	26.00
8	13½	17½	26.50	29.75
9	15	19½	37.50	42.00
10	16	20½	42.00	47.50
12	19	24½	61.50	67.50
14	21	27	91.00	98.50
15	22¼	28½	103.00	112.00
16	23½	30	120.00	130.00
18	25	32	157.00	169.00
20	27½	35	198.00	212.00
22	29½	37½	248.00	266.00
24	32	40½	310.00	330.00

\*Flanges faced and drilled.

All laterals reducing on run only, carry the same dimensions, face to face, as straight size laterals. Sizes 18 inches, and up, reducing on the branch, are made in two lengths, depending on the size of the branch. Furnished faced only, unless otherwise specified on order.



# STANDARD FLANGED FITTINGS

FOR STEAM WORKING PRESSURES UP TO 125 POUNDS

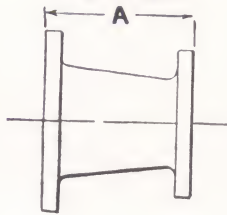
## TAPER REDUCERS

STANDARD



Fig. 92A

DIMENSIONS



ECCENTRIC

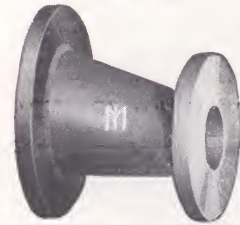


Fig. 92B

New Standard, effective Jan. 1, 1915.  
Recommended by the American Society  
of Mechanical Engineers, National Association  
of Steam and Hot Water Fitters  
and Manufacturers' Committee.

Size Inches	Diam. of Flanges Inches	Face to Face Inches	PRICE, EACH With Faced Flanges	PRICE, EACH With *Drilled Flanges
3 x 2	7 1/2 x 6	6	6.90	7.60
3 1/2 x 2 1/2	8 1/2 x 7	6 1/2	8.10	8.95
4 x 2	9 x 6	7	9.00	10.00
4 x 2 1/2	9 x 7	7	9.00	10.00
4 x 3	9 x 7 1/2	7	9.00	10.00
5 x 2	10 x 6	8	12.50	13.50
5 x 2 1/2	10 x 7	8	12.50	13.50
5 x 3	10 x 7 1/2	8	12.50	13.50
5 x 4	10 x 9	8	12.50	13.50
6 x 3	11 x 7 1/2	9	15.25	16.55
6 x 3 1/2	11 x 8 1/2	9	15.25	16.55
6 x 4	11 x 9	9	15.25	16.55
6 x 5	11 x 10	9	15.25	16.55
7 x 3	12 1/2 x 7 1/2	10	21.00	22.50
7 x 4	12 1/2 x 9	10	21.00	22.50
7 x 5	12 1/2 x 10	10	21.00	22.50
7 x 6	12 1/2 x 11	10	21.00	22.50
8 x 3	13 1/2 x 7 1/2	11	24.00	25.60
8 x 4	13 1/2 x 9	11	24.00	25.60
8 x 5	13 1/2 x 10	11	24.00	25.60
8 x 6	13 1/2 x 11	11	24.00	25.60
10 x 4	16 x 9	12	38.00	40.70
10 x 5	16 x 10	12	38.00	40.70
10 x 6	16 x 11	12	38.00	40.70
10 x 8	16 x 13 1/2	12	38.00	40.70
12 x 5	19 x 10	14	56.00	59.00
12 x 6	19 x 11	14	56.00	59.00
12 x 8	19 x 13 1/2	14	56.00	59.00
12 x 10	19 x 16	14	56.00	59.00
14 x 6	21 x 11	16	70.00	73.75
14 x 8	21 x 13 1/2	16	70.00	73.75
14 x 10	21 x 16	16	70.00	73.75
14 x 12	21 x 19	16	70.00	73.75

\*Flanges faced and drilled.

Size Inches	Diam. of Flanges Inches	Face to Face Inches	PRICE, EACH With Faced Flanges	PRICE, EACH With *Drilled Flanges
15 x 8	22 1/4 x 13 1/2	17	80.00	84.50
15 x 10	22 1/4 x 16	17	80.00	84.50
15 x 12	22 1/4 x 19	17	80.00	84.50
15 x 14	22 1/4 x 21	17	80.00	84.50
16 x 8	23 1/2 x 13 1/2	18	90.00	95.00
16 x 10	23 1/2 x 16	18	90.00	95.00
16 x 12	23 1/2 x 19	18	90.00	95.00
16 x 14	23 1/2 x 21	18	90.00	95.00
18 x 10	25 x 16	19	105.00	111.00
18 x 12	25 x 19	19	105.00	111.00
18 x 14	25 x 21	19	105.00	111.00
18 x 16	25 x 23 1/2	19	105.00	111.00
20 x 12	27 1/2 x 19	20	120.00	127.00
20 x 14	27 1/2 x 21	20	120.00	127.00
20 x 16	27 1/2 x 23 1/2	20	120.00	127.00
20 x 18	27 1/2 x 25	20	120.00	127.00
22 x 14	29 1/2 x 21	22	150.00	159.00
22 x 16	29 1/2 x 23 1/2	22	150.00	159.00
22 x 18	29 1/2 x 25	22	150.00	159.00
22 x 20	29 1/2 x 27 1/2	22	150.00	159.00
24 x 16	32 x 23 1/2	24	190.00	200.00
24 x 18	32 x 25	24	190.00	200.00
24 x 20	32 x 27 1/2	24	190.00	200.00
24 x 22	32 x 29 1/2	24	190.00	200.00

\*Flanges faced and drilled.

Bolt holes will be drilled 1/8-inch larger  
in diameter than the diameter of the bolts.  
Bolt holes will always straddle center  
line. The face to face dimensions, stand-  
ard or eccentric will be the same.

Flanged taper reducers of any other  
dimensions special on order.

Furnished faced only, unless otherwise  
specified on order.

## ECCENTRIC REDUCERS

Eccentric Taper Reducers furnished on  
special order. Prices upon application.

# STANDARD FLANGED FITTINGS

FOR STEAM WORKING PRESSURES UP TO 125 POUNDS

## SINGLE SWEEP TEES



Fig. 26A

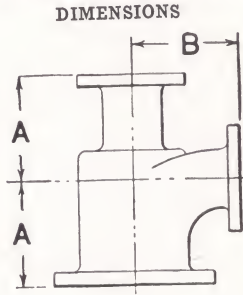


Fig. 26B

New Standard, effective Jan. 1, 1915.  
Recommended by the American Society  
of Mechanical Engineers, National Association  
of Steam and Hot Water Fitters  
and Manufacturers' Committee.

### STRAIGHT SIZES

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH With Faced Flanges	PRICE, EACH With *Drilled Flanges
2	6	4½	5.00	5.90
2½	7	5	5.25	6.15
3	7½	5½	5.75	6.85
3½	8½	6	6.75	8.00
4	9	6½	7.50	9.00
4½	9¼	7	9.25	10.75
5	10	7½	10.50	12.00
6	11	8	12.65	14.60
7	12½	8½	17.50	19.75
8	13½	9	20.00	22.40
9	15	10	28.50	31.85
10	16	11	31.50	35.50
12	19	12	46.50	51.00
14	21	14	69.00	74.50
15	22¼	14½	78.00	84.75
16	23½	15	91.00	98.50
18	25	16½	118.00	127.00
20	27½	18	150.00	160.00
22	29½	20	189.00	202.00
24	32	22	233.00	248.00

\*Flanges faced and drilled.

All reducing tees, 16 inches and smaller, take the same center to face dimensions as straight size tees. All tees reducing on the run only, take the same dimensions center to face, as the largest straight size. Tees, sizes 18 inches and larger, and reducing on the outlet, are made in two lengths, depending on the size of the reduced outlet.

### REDUCING SIZES

#### REDUCING IN RUN OR BRANCH

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH With Faced Flanges	PRICE, EACH With *Drilled Flanges
2½	7	5	6.00	6.90
3	7½	5½	6.60	7.70
3½	8½	6	7.75	9.00
4	9	6½	8.65	10.15
4½	9¼	7	10.60	12.10
5	10	7½	12.00	13.50
6	11	8	14.50	16.45
7	12½	8½	20.00	22.25
8	13½	9	23.00	25.40
9	15	10	32.75	36.10
10	16	11	36.00	40.00
12	19	12	53.50	58.00
14	21	14	79.00	84.50
16	22¼	14½	90.00	96.75
16	23½	15	105.00	112.50
18	25	16½	135.00	144.00
20	27½	18	173.00	183.00
22	29½	20	217.00	230.00
24	32	22	268.00	283.00

\*Flanges faced and drilled.

Reducing Single Sweep Tees made to order only. Single Sweep Tees with the side openings larger than the run are not made.

Bolt holes are drilled ⅛-inch larger in diameter than the diameters of bolts. Bolt holes are drilled to straddle center line. Sizes of all fittings scheduled, indicates the inside diameter of ports.

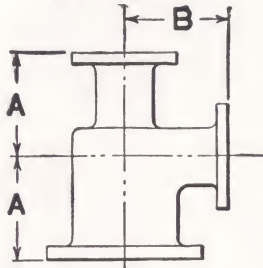
Furnished faced only, unless otherwise specified on order.

Larger sizes furnished to order.

Prices upon application.

**STANDARD FLANGED FITTINGS**

FOR STEAM WORKING PRESSURES UP TO 125 POUNDS

**DOUBLE SWEEP TEES****STRAIGHT****Fig. 27A****DIMENSIONS****REDUCING****Fig. 27B**

New Standard, effective Jan. 1, 1915.  
Recommended by the American Society  
of Mechanical Engineers, National Association  
of Steam and Hot Water Fitters  
and Manufacturers' Committee.

**STRAIGHT SIZES**

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH With Faced Flanges	PRICE, EACH *Drilled Flanges
2	6	4½	5.00	5.90
2½	7	5	5.25	6.15
3	7½	5½	5.75	6.85
3½	8½	6	6.75	8.00
4	9	6½	7.50	9.00
4½	9¼	7	9.25	10.75
5	10	7½	10.50	12.00
6	11	8	12.65	14.60
7	12½	8½	17.50	19.75
8	13½	9	20.00	22.40
9	15	10	28.50	31.85
10	16	11	31.50	35.50
12	19	12	46.50	51.00
14	21	14	69.00	74.50
15	22¼	14½	78.00	84.75
16	23½	15	91.00	98.50
18	25	16½	118.00	127.00
20	27½	18	150.00	160.00
22	29½	20	189.00	202.00
24	32	22	233.00	248.00

\*Flanges faced and drilled all reducing  
tees reducing on the outlet, 16 inches and  
smaller, take the same center to face  
dimensions as straight size tees.

Tees, sizes 18 inches and larger, reducing  
on the outlet are made in two lengths,  
depending on the size of the outlet.

Furnished faced only, unless otherwise  
specified on order.

**REDUCING SIZES****REDUCING IN BRANCH ONLY**

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH With Faced Flanges	PRICE, EACH *Drilled Flanges
2	6	4½	5.75	6.65
2½	7	5	6.00	6.90
3	7½	5½	6.60	7.70
3½	8½	6	7.75	9.00
4	9	6½	8.65	10.15
4½	9¼	7	10.60	12.10
5	10	7½	12.00	13.50
6	11	8	14.50	16.45
7	12½	8½	20.00	22.25
8	13½	9	23.00	25.40
9	15	10	32.75	36.10
10	16	11	36.00	40.00
12	19	12	53.50	58.00
14	21	14	79.00	84.50
15	22¼	14½	90.00	96.75
16	23½	15	105.00	112.50
18	25	16½	135.00	144.00
20	27½	18	173.00	183.00
22	29½	20	217.00	230.00
24	32	22	268.00	283.00

\*Flanges faced and drilled.

Double sweep tees are not made reducing  
on the run. Should such tees, how-  
ever, be wanted we can have the pat-  
terns altered (which will be expensive) and  
charged at a special price.

The branch (outlet) can only be in-  
creased within a reasonable limit, which  
must be regulated by the pattern.

Bolt holes are drilled ⅛ inch larger in  
diameter than the diameter of bolts.

Larger sizes furnished to order. Prices  
on application.



# STANDARD COMPANION AND BLIND FLANGES

FOR STEAM WORKING PRESSURES UP TO 125 POUNDS

AMERICAN STANDARD—EFFECTIVE JAN. 1, 1915

## COMPANION FLANGES

Back View Showing Hub



Fig. 8619A

Smooth Face

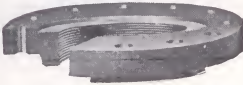


Fig. 8619B

Size Inches	CAST IRON PRICE, EACH		MALLEABLE IRON PRICE, EACH	
	Faced	Faced and Drilled	Faced	Faced and Drilled
1 x 4	.55	.80	1.10	1.60
1 1/4 x 4 1/2	.60	.85	1.20	1.70
1 1/2 x 5	.65	.90	1.30	1.80
2 x 6	.75	1.00	1.50	2.00
2 1/2 x 7	.85	1.10	1.70	2.20
3 x 7 1/2	.95	1.25	1.90	2.50
3 1/2 x 8 1/2	1.20	1.55	2.40	3.10
4 x 9	1.35	1.80	2.70	3.60
4 1/2 x 9 1/4	1.45	1.90	2.90	3.80
5 x 10	1.60	2.05	3.20	4.10
6 x 11	2.00	2.50	4.00	5.00
7 x 12 1/2	2.65	3.25	5.30	6.50
8 x 13 1/2	3.10	3.80	6.20	7.60
9 x 15	3.85	4.65	7.70	9.30
10 x 16	4.50	5.50	9.00	11.00
12 x 19	6.50	7.65	13.00	15.30
14 x 21	9.00	10.35	18.00	20.70
15 x 21	11.50	13.20	23.00	26.40
15 x 22 1/4	11.50	13.20	23.00	26.40
16 x 23 1/2	13.50	15.30	27.00	30.60
18 x 25	16.00	18.00	32.00	36.00
20 x 27 1/2	19.00	21.50	38.00	43.00
22 x 29 1/2	22.00	25.00	44.00	50.00
24 x 32	27.00	30.50	54.00	61.00

All flanges faced but not drilled unless otherwise ordered.

## ECCENTRIC FLANGES

Made to order only.

Prices upon application.

## CAST IRON BLIND FLANGES

16-inch O. D. and Smaller



Fig. 8619C

17 1/2-inch O. D. and Larger



Fig. 8619D

Size Inches	PRICE, EACH	
	Faced	Faced and Drilled
2 x 6	1.15	1.40
2 1/2 x 7	1.30	1.55
3 x 7 1/2	1.40	1.70
3 1/2 x 8 1/2	1.80	2.15
4 x 9	2.00	2.45
4 1/2 x 9 1/4	2.20	2.65
5 x 10	2.40	2.85
6 x 11	3.00	3.50
7 x 12 1/2	4.00	4.60
8 x 13 1/2	4.60	5.30
9 x 15	5.75	6.55
10 x 16	6.75	7.75
12 x 19	9.75	10.90
14 x 21	13.50	14.85
15 x 22 1/4	17.00	18.70
16 x 23 1/2	20.00	21.80
18 x 25	24.00	26.00
20 x 27 1/2	28.00	30.50
22 x 29 1/2	33.00	36.00
24 x 32	40.00	43.50

All flanges faced but not drilled unless otherwise ordered.

Spot facing bolt holes, price 10 cents per hole.

Sizes 14-inch and larger are tapped to be used with outside diameter pipe of the same size.

# STANDARD REDUCING COMPANION FLANGES WITH RIBS

FOR STANDARD FLANGED VALVES AND FITTINGS  
For Steam Working Pressures up to 125 Pounds



Fig. 31A

These flanges, used in connection with straight or reducing fittings, enable us to fill orders for reduced sizes more promptly. Customers who desire fittings reduced in this manner will please specify "Reduce by Flanges if Necessary."

They will always be of the same thickness as the regular companion flanges of corresponding outside diameter, and drilled to the template corresponding to the outside diameter, unless otherwise ordered.

In ordering reducing companion flanges, always give the screwed or reduced size first, then the outside diameter of flange wanted; for instance, if a reducing flange is wanted to connect a 6-inch pipe to a 9-inch flanged valve or fitting having a 15-inch O. D. flange, order a 6x15-inch reducing flange. This will clearly avoid the confusion often caused by orders incorrectly calling for a 9x6 or 6x9-inch flange.

New Standard—Effective January 1, 1915

Recommended by the American Society of Mechanical Engineers, National Association of Master Steam and Hot Water Fitters and Manufacturers' Committee.

PRICE, EACH			PRICE, EACH			PRICE, EACH		
Size Inches	Faced only	Faced and Drilled	Size Inches	Faced only	Faced and Drilled	Size Inches	Faced only	Faced and Drilled
1 x 6	1.30	1.55	4 1/2 x 11	3.30	3.80	8 x 21	15.00	16.35
1 1/4 x 6	1.30	1.55	5 x 11	3.30	3.80	9 x 21	15.00	16.35
1 1/2 x 6	1.30	1.55	4 x 12 1/2	4.40	5.00	10 x 21	15.00	16.35
1 1/2 x 7	1.45	1.70	4 1/2 x 12 1/2	4.40	5.00	12 x 21	15.00	16.35
2 x 7	1.45	1.70	5 x 12 1/2	4.40	5.00	8 x 22 1/4	19.00	20.70
1 1/2 x 7 1/2	1.55	1.85	6 x 12 1/2	4.40	5.00	10 x 22 1/4	19.00	20.70
2 x 7 1/2	1.55	1.85	2 x 13 1/2	5.10	5.80	12 x 22 1/4	19.00	20.70
2 1/2 x 7 1/2	1.55	1.85	2 1/2 x 13 1/2	5.10	5.80	14 x 22 1/4	19.00	20.70
2 x 8 1/2	2.00	2.35	3 x 13 1/2	5.10	5.80	10 x 23 1/2	22.00	23.80
2 1/2 x 8 1/2	2.00	2.35	4 x 13 1/2	5.10	5.80	12 x 23 1/2	22.00	23.80
3 x 8 1/2	2.00	2.35	5 x 13 1/2	5.10	5.80	14 x 23 1/2	22.00	23.80
2 x 9	2.20	2.65	6 x 13 1/2	5.10	5.80	15 x 23 1/2	22.00	23.80
2 1/2 x 9	2.20	2.65	7 x 13 1/2	5.10	5.80	12 x 25	26.50	28.50
3 x 9	2.20	2.65	6 x 15	6.35	7.15	14 x 25	26.50	28.50
3 1/2 x 9	2.20	2.65	7 x 15	6.35	7.15	15 x 25	26.50	28.50
2 1/2 x 9 1/4	2.40	2.85	8 x 15	6.35	7.15	16 x 25	26.50	28.50
3 x 9 1/4	2.40	2.85	2 1/2 x 16	7.45	8.45	14 x 27 1/2	31.00	33.50
3 1/2 x 9 1/4	2.40	2.85	3 x 16	7.45	8.45	15 x 27 1/2	31.00	33.50
4 x 9 1/4	2.40	2.85	3 1/2 x 16	7.45	8.45	16 x 27 1/2	31.00	33.50
2 x 10	2.65	3.10	4 x 16	7.45	8.45	18 x 27 1/2	31.00	33.50
2 1/2 x 10	2.65	3.10	5 x 16	7.45	8.45	15 x 29 1/2	36.00	39.00
3 x 10	2.65	3.10	6 x 16	7.45	8.45	16 x 29 1/2	36.00	39.00
3 1/2 x 10	2.65	3.10	7 x 16	7.45	8.45	18 x 29 1/2	36.00	39.00
4 x 10	2.65	3.10	8 x 16	7.45	8.45	20 x 29 1/2	36.00	39.00
4 1/2 x 10	2.65	3.10	9 x 16	7.45	8.45	14 x 32	44.00	47.50
2 x 11	3.30	3.80	6 x 19	10.75	11.90	16 x 32	44.00	47.50
2 1/2 x 11	3.30	3.80	7 x 19	10.75	11.90	18 x 32	44.00	47.50
3 x 11	3.30	3.80	8 x 19	10.75	11.90	20 x 32	44.00	47.50
3 1/2 x 11	3.30	3.80	9 x 19	10.75	11.90	Size 14 inches and over are tapped to be used with O. D. pipe of the same sizes. Spot facing bolt holes, list price of 10c per hole.		
4 x 11	3.30	3.80	10 x 19	10.75	11.90			

Furnished smooth faced and not drilled, unless otherwise specified.

## TEMPLATES AND PRICES

### FOR DRILLING STANDARD AND LOW PRESSURE FLANGED VALVES AND FITTINGS

#### SIZES 1-INCH TO 48-INCH, INCLUSIVE

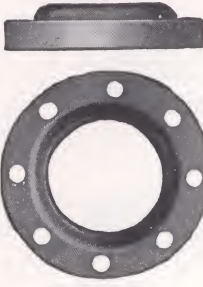


Fig. 8681A

These drilling templates are in multiples of four, so that fittings may be made to face in any quarter, and bolt holes straddle the center line. They can be drilled to any other template, if so desired.

Bolt holes are drilled  $\frac{1}{8}$  inch larger than nominal diameter of bolts, except that brass valves and fittings, 6-inch and smaller, have holes  $\frac{1}{16}$  inch larger than the bolts.

#### New Standard Effective January 1, 1915

Recommended by the American Society of Mechanical Engineers, National Association of Master Steam and Hot Water Fitters and Manufacturers' Committee.

Size Inches	Diam. of Flanges Inches	Thickness of Flanges Inches	Bolt Circle Inches	No. of Bolts	Size of Bolts Inches	Bolt Lengths Inches	PRICE, EACH, FOR DRILLING		
							With Two Flanges Except Angle Valves	Angle Valves	Cross Valves and Cross Safety Valves
1	4	$\frac{7}{16}$	3	4	$\frac{7}{16}$	$1\frac{1}{2}$	.60	1.00	1.20
$1\frac{1}{4}$	$4\frac{1}{2}$	$\frac{1}{2}$	$3\frac{3}{8}$	4	$\frac{7}{16}$	$1\frac{1}{2}$	.60	1.00	1.20
$1\frac{1}{2}$	5	$\frac{9}{16}$	$3\frac{7}{8}$	4	$\frac{1}{2}$	$1\frac{3}{4}$	.60	1.00	1.20
2	6	$\frac{5}{8}$	$4\frac{3}{4}$	4	$\frac{5}{8}$	2	.75	1.25	1.50
$2\frac{1}{2}$	7	$\frac{11}{16}$	$5\frac{1}{2}$	4	$\frac{5}{8}$	$2\frac{1}{4}$	.75	1.25	1.50
3	$7\frac{1}{2}$	$\frac{3}{4}$	6	4	$\frac{5}{8}$	$2\frac{1}{2}$	.75	1.25	1.50
$3\frac{1}{2}$	$8\frac{1}{2}$	$\frac{13}{16}$	7	4	$\frac{5}{8}$	$2\frac{3}{4}$	1.00	1.50	2.00
4	9	$\frac{15}{16}$	$7\frac{1}{2}$	8	$\frac{5}{8}$	$2\frac{3}{4}$	1.25	1.75	2.50
$4\frac{1}{2}$	$9\frac{1}{4}$	$\frac{15}{16}$	$7\frac{3}{4}$	8	$\frac{3}{4}$	3	1.50	2.00	3.00
5	10	$\frac{15}{16}$	8	8	$\frac{3}{4}$	3	1.50	2.00	3.00
6	11	1	$9\frac{1}{2}$	8	$\frac{3}{4}$	3	1.75	2.50	3.50
7	$12\frac{1}{2}$	$\frac{11}{16}$	$10\frac{3}{4}$	8	$\frac{3}{4}$	3	2.25	3.00	4.50
8	$13\frac{1}{2}$	$\frac{11}{16}$	$11\frac{3}{4}$	8	$\frac{3}{4}$	$3\frac{1}{4}$	2.25	3.00	4.50
9	15	$\frac{11}{16}$	$13\frac{1}{4}$	12	$\frac{3}{4}$	$3\frac{1}{4}$	2.50	3.50	5.00
10	16	$\frac{13}{16}$	$14\frac{1}{4}$	12	$\frac{7}{8}$	$3\frac{1}{2}$	2.50	3.50	5.00
12	19	$\frac{11}{4}$	17	12	$\frac{7}{8}$	$3\frac{3}{4}$	3.50	5.00	7.00
14	21	$\frac{13}{8}$	$18\frac{3}{4}$	12	1	$4\frac{1}{4}$	4.00	6.00	....
15	$22\frac{1}{4}$	$\frac{13}{8}$	20	16	1	$4\frac{1}{4}$	4.50	6.50	....
16	$23\frac{1}{2}$	$\frac{17}{16}$	$21\frac{1}{4}$	16	1	$4\frac{1}{4}$	5.00	7.00	....
18	25	$\frac{19}{16}$	$22\frac{3}{4}$	16	$\frac{1}{8}$	$4\frac{3}{4}$	6.00	10.00	....
20	$27\frac{1}{2}$	$\frac{11}{16}$	25	20	$\frac{1}{8}$	5	7.50	12.00	....
22	$29\frac{1}{2}$	$\frac{13}{16}$	$27\frac{1}{4}$	20	$\frac{1}{4}$	$5\frac{1}{2}$	9.00	14.00	....
24	32	$\frac{17}{8}$	$29\frac{1}{2}$	20	$\frac{1}{4}$	$5\frac{1}{2}$	10.00	16.00	....
26	$34\frac{1}{4}$	2	$31\frac{3}{4}$	24	$\frac{1}{4}$	$5\frac{3}{4}$	11.00	18.00	....
28	$36\frac{1}{2}$	$\frac{21}{16}$	34	28	$\frac{1}{4}$	6	12.00	20.00	....
30	$38\frac{3}{4}$	$\frac{21}{8}$	36	28	$\frac{1}{8}$	$6\frac{1}{4}$	12.00	22.00	....
32	$41\frac{3}{4}$	$\frac{21}{4}$	$38\frac{1}{2}$	28	$\frac{1}{2}$	$6\frac{1}{2}$	12.00	22.00	....
34	$43\frac{3}{4}$	$\frac{25}{16}$	$40\frac{1}{2}$	32	$\frac{1}{2}$	$6\frac{1}{2}$	14.00	24.00	....
36	46	$\frac{23}{8}$	$42\frac{3}{4}$	32	$\frac{1}{2}$	7	14.00	24.00	....
38	$48\frac{3}{4}$	$\frac{23}{8}$	$45\frac{1}{4}$	32	$\frac{5}{8}$	7	....	....	....
40	$50\frac{3}{4}$	$\frac{21}{2}$	$47\frac{1}{4}$	36	$\frac{5}{8}$	7	....	....	....
42	53	$\frac{25}{8}$	$49\frac{1}{2}$	36	$\frac{1}{8}$	$7\frac{1}{2}$	25.00	....	....
44	$55\frac{1}{4}$	$\frac{25}{8}$	$51\frac{3}{4}$	40	$\frac{5}{8}$	$7\frac{1}{2}$	....	....	....
46	$57\frac{1}{4}$	$\frac{21}{16}$	$53\frac{3}{4}$	40	$\frac{5}{8}$	$7\frac{1}{2}$	30.00	....	....
48	$59\frac{1}{2}$	$\frac{23}{4}$	56	44	$\frac{1}{8}$	8	....	....	....



## STANDARD FLANGED FITTINGS AND FLANGES

## EXTRA PRICE FOR GALVANIZING

Galvanized Standard Cast Iron Flanged Fittings will be made to order at an advance over the black price as stated below.

Galvanized Standard Cast Iron Flanged Fittings will be made to order at an advance over the black price as stated below.

Size In.	Flanged Taper Reducers	Flanged Elbows	Reducing Flanged Elbows	Flanged 45° Elbows	Size In.	Flanged Long Radius Elbows	Flanged Base Elbows	Flanged Tees	Flanged Reducing Tees
1 1/4	2.40	2.40	2.40	2.40	1 1/4	3.60	3.60	3.60	3.60
1 1/2	2.40	2.40	2.40	2.40	1 1/2	3.60	3.60	3.60	3.60
2	2.40	2.40	2.40	2.40	2	3.60	3.60	3.60	3.60
2 1/2	2.50	2.50	2.50	2.50	2 1/2	3.75	3.75	3.75	3.75
3	2.75	2.75	2.75	2.75	3	4.15	4.15	4.15	4.15
3 1/2	3.25	3.25	3.25	3.25	3 1/2	4.90	4.90	4.90	4.90
4	3.65	3.65	3.65	3.65	4	5.50	5.50	5.50	5.50
4 1/2	4.35	4.35	4.35	4.35	4 1/2	6.50	6.50	6.50	6.50
5	4.85	4.85	4.85	4.85	5	7.25	7.25	7.25	7.25
6	6.00	6.00	6.00	6.00	6	9.00	9.00	9.00	9.00
7	8.00	8.00	8.00	8.00	7	12.00	12.00	12.00	12.00
8	9.00	9.00	9.00	9.00	8	13.50	13.50	13.50	13.50
9	13.00	13.00	13.00	13.00	9	19.50	19.50	19.50	19.50
10	14.50	14.50	14.50	14.50	10	22.00	22.00	22.00	22.00
12	21.00	21.00	21.00	21.00	12	31.00	31.00	31.00	31.00
14	30.00	30.00	30.00	30.00	14	45.00	45.00	45.00	45.00
15	35.00	35.00	35.00	35.00	15	52.50	52.50	52.50	52.50
16	40.00	40.00	40.00	40.00	16	60.00	60.00	60.00	60.00

Size In.	Flanged Crosses	Flanged Reducing Crosses	Flanged Laterals	Reducing Flanged Laterals	Size In.	Companion Flanges	REDUCING COMPANION FLANGES Diam. In. Price Each	BLIND FLANGES Diam. In. Price Each
1 1/4	4.80	4.80	4.80	4.80	1 1/4	.60	.....	.....
1 1/2	4.80	4.80	4.80	4.80	1 1/2	.60	.....	.....
2	4.80	4.80	4.80	4.80	2	.70	6	1.00
2 1/2	5.00	5.00	5.00	5.00	2 1/2	.75	7	1.10
3	5.50	5.50	5.50	5.50	3	.85	7 1/2	1.25
3 1/2	6.50	6.50	6.50	6.50	3 1/2	1.00	8 1/2	1.50
4	7.25	7.25	7.25	7.25	4	1.20	9	1.80
4 1/2	8.75	8.75	8.75	8.75	4 1/2	1.25	9 1/4	1.90
5	9.75	9.75	9.75	9.75	5	1.35	10	2.00
6	12.00	12.00	12.00	12.00	6	1.65	11	2.50
7	16.00	16.00	16.00	16.00	7	2.15	12 1/2	3.25
8	18.00	18.00	18.00	18.00	8	2.50	13 1/2	3.75
9	26.00	26.00	26.00	26.00	9	3.00	15	4.50
10	29.00	29.00	29.00	29.00	10	3.75	16	5.75
12	42.00	42.00	42.00	42.00	12	5.00	19	7.50
14	60.00	60.00	60.00	60.00	14	7.00	21	10.50
15	70.00	70.00	70.00	70.00	15	9.00	22 1/4	13.50
16	80.00	80.00	80.00	80.00	16	10.50	23 1/2	16.00

# **STANDARD CAST IRON REDUCING FLANGED FITTINGS**

## **LIST OF SIZES—REDUCING FLANGED TEES**

2 1/2 x 2 1/2 x 2	5 x 4 x 3	8 x 8 x 3 1/2	10 x 8 x 7
2 1/2 x 2 1/2 x 1 1/2	5 x 4 x 2 1/2	8 x 8 x 3	10 x 8 x 6
2 1/2 x 2 x 1 1/2	5 x 4 x 2	8 x 8 x 2 1/2	10 x 8 x 5
3 x 3 x 2 1/2	5 x 3 1/2 x 4	8 x 8 x 2	10 x 8 x 4
3 x 3 x 2	5 x 3 x 3 1/2	8 x 7 x 8	10 x 7 x 7
3 x 3 x 1 1/2	5 x 3 x 3	8 x 6 x 8	10 x 6 x 8
3 x 3 x 1 1/4	4 x 4 x 5	8 x 5 x 8	10 x 6 x 6
3 x 2 1/2 x 3		8 x 4 x 8	8 x 8 x 10
3 x 2 1/2 x 2 1/2	6 x 6 x 5	8 x 3 1/2 x 8	8 x 6 x 10
3 x 2 1/2 x 2	6 x 6 x 4 1/2	8 x 3 x 8	6 x 6 x 10
3 x 2 1/2 x 2	6 x 6 x 4	8 x 7 x 7	
3 x 2 x 2 1/2	6 x 6 x 3 1/2	8 x 7 x 6	12 x 12 x 10
3 x 2 x 3	6 x 6 x 3	8 x 7 x 5	12 x 12 x 9
2 1/2 x 2 1/2 x 3	6 x 6 x 2 1/2	8 x 7 x 4	12 x 12 x 8
	6 x 6 x 2	8 x 6 x 6	12 x 12 x 7
3 1/2 x 3 1/2 x 3	6 x 6 x 1 1/2	8 x 6 x 5	12 x 12 x 6
3 1/2 x 3 1/2 x 2 1/2	6 x 5 x 6	8 x 6 x 4	12 x 12 x 5
3 1/2 x 3 1/2 x 2	6 x 4 x 6	8 x 6 x 3	12 x 12 x 4 1/2
3 1/2 x 2 1/2 x 2 1/2	6 x 3 x 6	8 x 5 x 7	12 x 12 x 4
	6 x 2 1/2 x 6	8 x 5 x 6	12 x 12 x 3
4 x 4 x 3 1/2	6 x 2 x 6	8 x 5 x 5	12 x 12 x 2
4 x 4 x 3	6 x 5 x 5	8 x 4 x 6	12 x 10 x 12
4 x 4 x 2 1/2	6 x 5 x 4	8 x 4 x 4	12 x 8 x 12
4 x 4 x 2	6 x 5 x 3	7 x 7 x 8	12 x 6 x 12
4 x 4 x 1 1/2	6 x 5 x 2 1/2	6 x 6 x 8	12 x 4 x 12
4 x 4 x 1 1/4	6 x 4 x 5	5 x 5 x 8	12 x 10 x 10
4 x 3 1/2 x 4	6 x 4 x 4		12 x 10 x 8
4 x 3 x 4	6 x 4 x 3	9 x 9 x 8	12 x 10 x 6
4 x 2 1/2 x 4	6 x 4 x 2 1/2	9 x 9 x 7	12 x 8 x 10
4 x 2 x 4	5 x 5 x 6	9 x 9 x 6	12 x 8 x 8
4 x 3 x 3	5 x 4 x 6	9 x 9 x 5	12 x 8 x 6
4 x 3 x 2 1/2	4 x 4 x 6	9 x 9 x 4	12 x 6 x 8
4 x 3 x 2		9 x 9 x 3	10 x 10 x 12
4 x 2 1/2 x 3	7 x 7 x 6	9 x 9 x 2 1/2	8 x 8 x 12
4 x 2 1/2 x 2 1/2	7 x 7 x 5	9 x 6 x 6	
4 x 2 x 2	7 x 7 x 4		14 x 14 x 12
3 x 3 x 4	7 x 7 x 3 1/2	10 x 10 x 9	14 x 14 x 10
	7 x 7 x 3	10 x 10 x 8	14 x 14 x 8
4 1/2 x 4 1/2 x 4	7 x 7 x 2 1/2	10 x 10 x 7	14 x 14 x 7
4 1/2 x 4 1/2 x 3	7 x 7 x 2	10 x 10 x 6	14 x 14 x 6
4 1/2 x 4 1/2 x 2 1/2	7 x 6 x 7	10 x 10 x 5	14 x 14 x 5
	7 x 5 x 7	10 x 10 x 4 1/2	14 x 12 x 14
5 x 5 x 4	7 x 4 x 7	10 x 10 x 4	14 x 12 x 12
5 x 5 x 3 1/2	7 x 3 x 7	10 x 10 x 3 1/2	14 x 10 x 10
5 x 5 x 3	7 x 6 x 6	10 x 10 x 3	10 x 10 x 14
5 x 5 x 2 1/2	7 x 6 x 5	10 x 10 x 2 1/2	
5 x 5 x 2	6 x 6 x 7	10 x 10 x 2	16 x 16 x 14
5 x 5 x 1 1/2	5 x 5 x 7	10 x 8 x 10	16 x 16 x 12
5 x 5 x 1 1/4		10 x 7 x 10	16 x 16 x 10
5 x 4 x 5		10 x 6 x 10	16 x 16 x 8
5 x 3 x 5	8 x 8 x 7	10 x 5 x 10	16 x 16 x 7
5 x 2 1/2 x 5	8 x 8 x 6	10 x 4 x 10	16 x 16 x 6
5 x 2 x 5	8 x 8 x 5	10 x 3 x 10	16 x 12 x 12
5 x 4 x 4	8 x 8 x 4 1/2	10 x 8 x 8	12 x 12 x 16
	8 x 8 x 4		

(Continued on following page.)

**STANDARD CAST IRON FLANGED FITTINGS****REDUCING SINGLE SWEEP FLANGED TEES**

6 x 6 x 5	6 x 6 x 2½	8 x 8 x 3	10 x 10 x 6
6 x 6 x 4	8 x 8 x 6	8 x 6 x 6	10 x 8 x 8
6 x 6 x 3	8 x 8 x 5	8 x 6 x 4	10 x 6 x 6

**REDUCING DOUBLE SWEEP FLANGED TEES**

4 x 4 x 2	6 x 6 x 3	10 x 10 x 6	10 x 10 x 4
6 x 6 x 5	8 x 8 x 6	10 x 10 x 5	.....

**REDUCING FLANGED CROSSES**

4 x 4 x 3 x 3	6 x 6 x 5 x 5	8 x 8 x 5 x 5	8 x 6 x 8 x 6
5 x 5 x 4 x 4	6 x 6 x 4 x 4	8 x 8 x 4 x 4	10 x 10 x 8 x 8
5 x 5 x 3 x 3	6 x 6 x 3 x 3	8 x 8 x 3 x 3	10 x 10 x 6 x 6
5 x 5 x 2½ x 2½	8 x 8 x 6 x 6	8 x 6 x 6 x 6	10 x 10 x 5 x 5

**REDUCING FLANGED LATERALS**

4 x 4 x 2½	8 x 8 x 6	10 x 10 x 6
6 x 6 x 4	8 x 6 x 6	10 x 8 x 8
6 x 6 x 3	8 x 8 x 3	.....
6 x 6 x 2½	10 x 10 x 8	.....

These sizes, as listed above and on preceding page, with special reducing companion flanges, enable us to furnish about every variety of fittings required, except special angles, offsets, etc.

Reducing flanges are listed on another page. These flanges will always be the same thickness as the regular companion flanges of corresponding outside diameter.

The flanges are always drilled to the template corresponding to the outside diameter, unless otherwise ordered.

Customers who desire fittings reduced in this manner will please specify "REDUCE BY FLANGES IF NECESSARY."

**PRICES OF SIZES NOT SHOWN**

Sizes not covered in the list of sizes will be considered special, and made to order at the following advance in prices, according to the quantity of a size ordered at one time, viz.:

**Add to the Regular List Prices of Reducing Flanged Fittings  
the Percentage Advances Given Below**

Size	One Piece	Two Pieces	Three Pieces	Four Pieces	Five Pieces	Six or More
3½-inch and Smaller	100%	80%	60%	40%	20%	No Advance
4 to 8-inch	50%	40%	30%	20%	10%	" "
9 " 10 "	25%	20%	15%	10%	5%	" "

Sizes 12-inch and larger, will be made to order in quantities of one or more of a size, at the regular list and discount.



# EXTRA HEAVY FLANGED FITTINGS

FOR STEAM WORKING PRESSURES UP TO 250 POUNDS

## ELBOWS

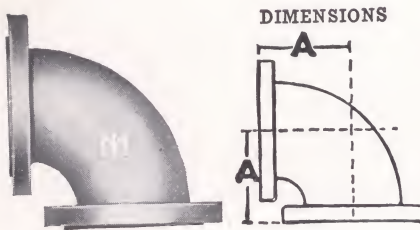


Fig. 36A

New Standard effective Jan. 1, 1915.  
Recommended by the American Society  
of Mechanical Engineers, National Association  
of Steam and Hot Water Fitters  
and Manufacturers' Committee.

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH — With Faced Flanges	With *Drilled Flanges
1 1/4	5	4 1/4	4.50	5.40
1 1/2	6	4 1/2	4.50	5.40
2	6 1/2	5	4.50	5.40
2 1/2	7 1/2	5 1/2	4.75	5.65
3	8 1/4	6	5.15	6.25
3 1/2	9	6 1/2	6.10	7.35
4	10	7	6.75	8.25
4 1/2	10 1/2	7 1/2	8.25	9.75
5	11	8	9.35	10.85
6	12 1/2	8 1/2	11.40	13.40
7	14	9	15.75	18.00
8	15	10	18.00	20.50
9	16 1/4	10 1/2	25.50	28.85
10	17 1/2	11 1/2	28.50	32.50
12	20 1/2	13	42.00	46.50
14	23	15	62.00	67.50
15	24 1/2	15 1/2	70.00	77.00
16	25 1/2	16 1/2	82.00	90.00
18	28	18	106.00	115.00
20	30 1/2	19 1/2	135.00	145.00
22	33	20 1/2	170.00	183.00
24	36	22 1/2	210.00	225.00

\*Flanges faced and drilled.

All extra heavy fittings and flanges have  
a raised surface for gaskets 1/8-inch high,  
inside of bolt holes.

Furnished faced only, unless otherwise  
ordered.

Larger sizes made to order. Prices  
upon application.

## 45° ELBOWS

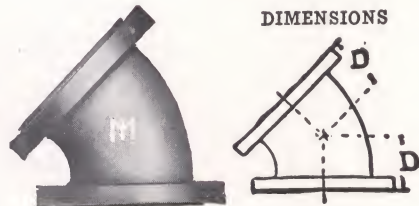


Fig. 36B

New Standard effective Jan. 1, 1915.  
Recommended by the American Society  
of Mechanical Engineers, National Association  
of Steam and Hot Water Fitters  
and Manufacturers' Committee.

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH — With Faced Flanges	With *Drilled Flanges
1 1/4	5	2 1/2	5.00	5.90
1 1/2	6	2 3/4	5.00	5.90
2	6 1/2	3	5.00	5.90
2 1/2	7 1/2	3 1/2	5.25	6.15
3	8 1/4	3 1/2	5.65	6.75
3 1/2	9	4	6.75	8.00
4	10	4 1/2	7.50	9.00
4 1/2	10 1/2	4 1/2	9.00	10.50
5	11	5	10.35	11.85
6	12 1/2	5 1/2	12.50	14.50
7	14	6	16.50	18.75
8	15	6	19.00	21.50
9	16 1/4	6 1/2	26.75	30.10
10	17 1/2	7	30.00	34.00
12	20 1/2	8	44.00	48.50
14	23	8 1/2	62.00	67.50
15	24 1/2	9	70.00	77.00
16	25 1/2	9 1/2	82.00	90.00
18	28	10	106.00	115.00
20	30 1/2	10 1/2	135.00	145.00
22	33	11	170.00	183.00
24	36	12	210.00	225.00

\*Flanges faced and drilled.

All extra heavy fittings and flanges  
have a raised surface for gaskets 1/8-inch  
high, inside of bolt holes. Bolt holes will  
be drilled 1/8-inch larger than diameter  
of bolts. Furnished faced only, unless  
otherwise ordered.

Larger sizes made to order. Prices upon  
application.

# EXTRA HEAVY FLANGED FITTINGS

FOR STEAM WORKING PRESSURES UP TO 250 POUNDS

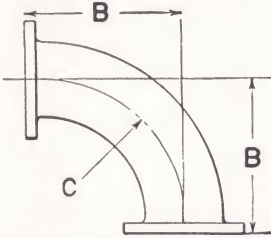
## LONG RADIUS ELBOWS



Fig. 8623A

New standard effective Jan. 1, 1915. Recommended by the American Society of Mechanical Engineers, National Association of Steam and Hot Water Fitters and Manufacturers' Committee.

### DIMENSIONS



Size Inches	Diam. of Flanges Inches	Center to Face, B Inches	Radius C Inches	Price, Each With Faced Flanges	Price, Each With *Drilled Flanges
2	6 1/2	6 1/2	5 1/4	7.50	8.85
2 1/2	7 1/2	7	5 5/8	8.00	9.35
3	8 1/4	7 3/4	6 1/4	8.60	10.25
3 1/2	9	8 1/2	6 7/8	10.25	12.15
4	10	9	7 3/8	11.25	13.50
4 1/2	10 1/2	9 1/2	7 3/4	13.75	16.00
5	11	10 1/4	8 1/2	15.50	17.75
6	12 1/2	11 1/2	9 5/8	19.00	22.00
7	14	12 3/4	10 7/8	26.50	29.85
8	15	14	12	30.00	33.75
9	16 1/4	15 1/4	13	42.50	47.50
10	17 1/2	16 1/2	14 1/8	47.75	53.75
12	20 1/2	19	16 1/2	70.00	76.75
14	23	21 1/2	18 7/8	103.50	111.75
15	24 1/2	22 3/4	20	117.00	127.00
16	25 1/2	24	21 1/4	137.00	149.00

\*Flanges faced and drilled.

Long radius Elbows of different dimensions from above. Furnished on order at a special price.

Faced only, unless otherwise ordered.

All extra heavy fittings and flanges have a raised surface for gaskets 1/16 inch high, inside of bolt holes.

## BASE ELBOWS, ROUND BASE

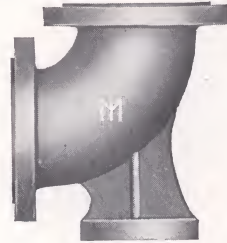


Fig. 8623B

Size In.	Price, Each Faced Except Base Flange	Price, Each Faced and Drilled Except Base Flange	Price, Each Facing and Drilling Base Flange
4	13.50	15.00	4.50
4 1/2	16.50	18.00	4.50
5	18.75	20.25	5.25
6	22.75	24.75	5.25
7	31.50	33.75	5.25
8	36.00	38.50	7.50
9	51.00	54.35	7.50
10	57.00	61.00	7.50
12	84.00	88.50	11.00
14	105.00	110.50	11.00
15	120.00	127.00	11.00
16	135.00	143.00	11.00

Base elbows are flanges faced only, as quoted, unless otherwise ordered.

Prices of base elbows larger than 16-inch quoted on application.

Size Inches	Diam. of *Flanges Inches	Center to Face Inches	Diam. Base †Flanges Inches	Center to Face Base Flange Inches
4	10	7	6 1/2	7
4 1/2	10 1/2	7 1/2	6 1/2	7 1/4
5	11	8	7 1/2	7 1/2
6	12 1/2	8 1/2	7 1/2	8
7	14	9	7 1/2	8 3/4
8	15	10	10	9 1/4
9	16 1/4	10 1/2	10	10
10	17 1/2	11 1/2	10	10 1/2
12	20 1/2	13	12 1/2	11
14	23	15	12 1/2	14
15	24 1/2	15 1/2	12 1/2	14 1/2
16	25 1/2	16 1/2	12 1/2	15 1/4

\*Port openings only, not base flange.

†The measurement across the flat edges of square base flange is the same as the diameter of the round base flange.

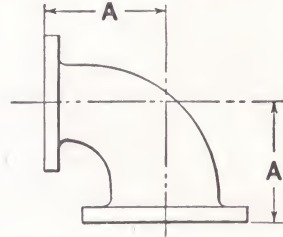
**EXTRA HEAVY FLANGED FITTINGS**

FOR STEAM WORKING PRESSURE UP TO 250 POUNDS

**REDUCING TAPER ELBOWS**

Fig. 6830A

Dimensions



New Standard effective Jan. 1, 1915.  
Recommended by the American Society  
of Mechanical Engineers, National Association  
of Steam and Hot Water Fitters  
and Manufacturers' Committee.

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH With Faced Flanges	*Drilled Flanges
2 x 1 1/4	6 1/2 x 5	5	9.00	9.90
2 x 1 1/2	6 1/2 x 6	5	9.00	9.90
2 1/2 x 1 1/2	7 1/2 x 6	5 1/2	9.50	10.40
2 1/2 x 2	7 1/2 x 6 1/2	5 1/2	9.50	10.40
3 x 1 1/2	8 1/4 x 6	6	10.25	11.35
3 x 2	8 1/4 x 6 1/2	6	10.25	11.35
3 x 2 1/2	8 1/4 x 7 1/2	6	10.25	11.35
3 1/2 x 2	9 x 6 1/2	6 1/2	12.25	13.50
3 1/2 x 2 1/2	9 x 7 1/2	6 1/2	12.25	13.50
3 1/2 x 3	9 x 8 1/4	6 1/2	12.25	13.50
4 x 2	10 x 6 1/2	7	13.50	15.00
4 x 2 1/2	10 x 7 1/2	7	13.50	15.00
4 x 3	10 x 8 1/4	7	13.50	15.00
4 x 3 1/2	10 x 9	7	13.50	15.00
5 x 2 1/2	11 x 7 1/2	8	18.75	20.25
5 x 3	11 x 8 1/4	8	18.75	20.25
5 x 4	11 x 10	8	18.75	20.25
6 x 3	12 1/2 x 8 1/4	8 1/2	22.75	24.75
6 x 3 1/2	12 1/2 x 9	8 1/2	22.75	24.75
6 x 4	12 1/2 x 10	8 1/2	22.75	24.75
6 x 4 1/2	12 1/2 x 10 1/2	8 1/2	22.75	24.75
6 x 5	12 1/2 x 11	8 1/2	22.75	24.75
7 x 4	14 x 10	9	31.50	33.75
7 x 5	14 x 11	9	31.50	33.75
7 x 6	14 x 12 1/2	9	31.50	33.75
8 x 4	15 x 10	10	36.00	38.50
8 x 5	15 x 11	10	36.00	38.50
8 x 6	15 x 12 1/2	10	36.00	38.50
8 x 7	15 x 14	10	36.00	38.50
10 x 5	17 1/2 x 11	11 1/2	57.00	61.00

\*Flanges faced and drilled.

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH With Faced Flanges	*Drilled Flanges
10x 6	17 1/2 x 12 1/2	11 1/2	57.00	61.00
10x 7	17 1/2 x 14	11 1/2	57.00	61.00
10x 8	17 1/2 x 15	11 1/2	57.00	61.00
12x 7	20 1/2 x 14	13	84.00	88.50
12x 8	20 1/2 x 15	13	84.00	88.50
12x 9	20 1/2 x 16 1/4	13	84.00	88.50
12x 10	20 1/2 x 17 1/2	13	84.00	88.50
14x 6	23 x 12 1/2	15	105.00	110.00
14x 10	23 x 17 1/2	15	105.00	110.00
14x 12	23 x 20 1/2	15	105.00	110.00
15x 6	24 1/2 x 12 1/2	15 1/2	120.00	127.00
15x 10	24 1/2 x 17 1/2	15 1/2	120.00	127.00
15x 12	24 1/2 x 20 1/2	15 1/2	120.00	127.00
16x 8	25 1/2 x 15	16 1/2	135.00	143.00
16x 10	25 1/2 x 17 1/2	16 1/2	135.00	143.00
16x 12	25 1/2 x 20 1/2	16 1/2	135.00	143.00
16x 14	25 1/2 x 23	16 1/2	135.00	143.00

\*Flanges faced and drilled.

All extra heavy fittings and flanges have a raised surface, for gaskets 1/8-inch high, inside of bolt holes. The bolt holes are drilled 1/8-inch larger than the diameter of bolts and straddle the center line. Reducing elbows carry same dimensions center to face as regular elbows of largest straight size.

The bolt holes on extra heavy cast iron flanged fittings will not be spot faced unless so ordered, for which an extra charge will be made.

All extra heavy flanged fittings ordered to comply with the A. S. M. E. Boiler Code are furnished spot faced.

Flanged fittings will be furnished faced only, unless otherwise specified.



EXTRA HEAVY FLANGED FITTINGS

FOR STEAM WORKING PRESSURES UP TO 250 POUNDS

REDUCING SIDE OUTLET ELBOWS

SIDE OUTLET ELBOWS

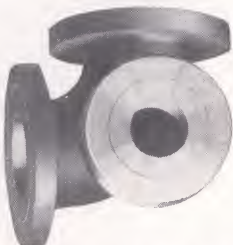


Fig. 8624C

Size	Diam. In.	Flanges In.	Center to Face	Price, Each With Faced and Drilled Flanges
16	16	10	7	42.00
14	14	8	7	39.75
12	12	8	7	41.75
10	10	8	7	44.00
8	8	8	7	50.00
6	6	8	7	60.00
4	4	8	7	71.00
3	3	8	7	99.00
2	2	8	7	105.00
1	1	8	7	130.00
3/4	3/4	8	7	161.75
1/2	1/2	8	7	183.00

REDUCING DOUBLE BRANCH ELBOWS



Fig. 8624D

Size	Diam. In.	Flanges In.	Center to Face	Price, Each With Faced and Drilled Flanges
16	16	10	7	42.00
14	14	8	7	39.75
12	12	8	7	47.75
10	10	8	7	54.50
8	8	8	7	62.50
6	6	8	7	73.75
4	4	8	7	77.50
3	3	8	7	94.00
2	2	8	7	100.00
1	1	8	7	125.00
3/4	3/4	8	7	156.75
1/2	1/2	8	7	188.00

Larger sizes made to order. Prices upon application. Bolt holes will be drilled 1/8-inch larger than diameter of bolts.

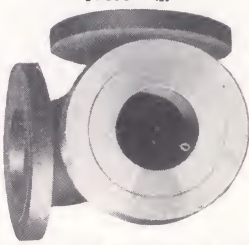


Fig. 8624A

Size	Diam. In.	Flanges In.	Center to Face	Price, Each With Faced and Drilled Flanges
16	16	10	7	38.00
14	14	8	7	40.00
12	12	8	7	42.00
10	10	8	7	45.00
8	8	8	7	51.75
6	6	8	7	61.25
4	4	8	7	65.00
3	3	8	7	95.00
2	2	8	7	120.00
1	1	8	7	146.75
3/4	3/4	8	7	168.00

DOUBLE BRANCH ELBOWS



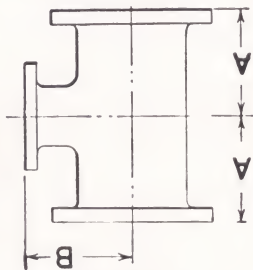
Fig. 8624B

Size	Diam. In.	Flanges In.	Center to Face	Price, Each With Faced and Drilled Flanges
16	16	10	7	38.00
14	14	8	7	42.75
12	12	8	7	49.50
10	10	8	7	56.25
8	8	8	7	66.25
6	6	8	7	70.00
4	4	8	7	90.00
3	3	8	7	108.25
2	2	8	7	141.75
1	1	8	7	168.00

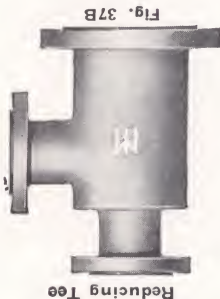
Larger sizes made to order. Prices upon application. All extra heavy fittings and flanges have a raised surface for gaskets 1/8 inch high, inside of bolt holes.

# EXTRA HEAVY FLANGED FITTINGS FOR STEAM WORKING PRESSURE UP TO 250 POUNDS

## TEES



Dimensions



Reducing Tee

Fig. 37B



Straight

Fig. 37A

New Standard, effective Jan. 1, 1915.  
Recommended by the American Society  
of Mechanical Engineers, National Asso-  
ciation of Steam and Hot Water Fitters  
and Manufacturers' Committee.

## STRAIGHT SIZES

Size Inches	Diam. of Flanges Inches	Face to Center Inches	Price, Each With Flanges *Drilled
1 1/2	5	4 1/2	7.85
1	4 1/2	4 1/2	7.85
2	6 1/2	6.50	7.85
2 1/2	7 1/2	6.50	7.85
3	8 1/4	6.90	8.25
3 1/2	9	7.50	9.15
4	10	8.90	10.80
4 1/2	10 1/2	9.75	12.00
5	11	10.80	14.25
6	12 1/2	13.50	15.75
6 1/2	13	16.50	19.50
7	14	26.00	29.75
8	15	37.00	42.00
9	16 1/2	41.50	47.50
10	17 1/2	61.00	67.75
12	20 1/2	90.00	98.25
14	23	102.00	112.00
15	24 1/2	151.00	161.00
16	25 1/2	154.00	168.00
18	28	195.00	210.00
20	30 1/2	247.00	267.00
22	33	305.00	328.00
24	36	221 1/2	

## \*Flanges faced and drilled.

All reducing tees, 16 inches and smaller, take the same center to face dimensions as straight size tees. All tees reducing on the run only, take the same dimensions to faces as the largest straight size. Tees, sizes 18 inches and larger, and reducing on the outlet, are made in two lengths, depending on the size of outlet.

For example:  
A 12x12x16-inch tee will be governed by the dimensions of the 16-inch long body tee (upper table), namely, 15 inches center to face of all openings and 30 inches face to face.  
Furnished faced only, unless otherwise specified. Larger sizes made to order.  
Prices upon application.

Size Inches	Diam. of Flanges Inches	Face to Center Inches	Price, Each With Flanges *Drilled
1 1/2	5	4 1/2	7.85
1	4 1/2	4 1/2	7.85
2	6 1/2	6.50	7.85
2 1/2	7 1/2	6.50	7.85
3	8 1/4	6.90	8.25
3 1/2	9	7.50	9.15
4	10	8.90	10.80
4 1/2	10 1/2	9.75	12.00
5	11	10.80	14.25
6	12 1/2	13.50	15.75
6 1/2	13	16.50	19.50
7	14	26.00	29.75
8	15	37.00	42.00
9	16 1/2	41.50	47.50
10	17 1/2	61.00	67.75
12	20 1/2	90.00	98.25
14	23	102.00	112.00
15	24 1/2	151.00	161.00
16	25 1/2	154.00	168.00
18	28	195.00	210.00
20	30 1/2	247.00	267.00
22	33	305.00	328.00
24	36	221 1/2	

## REDUCING IN RUN OR BRANCH REDUCING SIZES

Size Inches	Diam. of Flanges Inches	Face to Center Inches	Price, Each With Flanges *Drilled
1 1/2	5	4 1/2	7.85
1	4 1/2	4 1/2	7.85
2	6 1/2	6.50	7.85
2 1/2	7 1/2	6.50	7.85
3	8 1/4	6.90	8.25
3 1/2	9	7.50	9.15
4	10	8.90	10.80
4 1/2	10 1/2	9.75	12.00
5	11	10.80	14.25
6	12 1/2	13.50	15.75
6 1/2	13	16.50	19.50
7	14	26.00	29.75
8	15	37.00	42.00
9	16 1/2	41.50	47.50
10	17 1/2	61.00	67.75
12	20 1/2	90.00	98.25
14	23	102.00	112.00
15	24 1/2	151.00	161.00
16	25 1/2	154.00	168.00
18	28	195.00	210.00
20	30 1/2	247.00	267.00
22	33	305.00	328.00
24	36	221 1/2	

EXTRA HEAVY FLANGED FITTINGS

FOR STEAM WORKING PRESSURES UP TO 250 POUNDS

SIDE OUTLET TEES

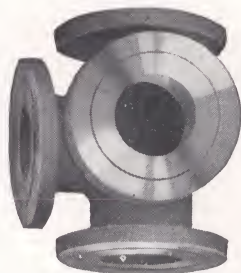


Fig. 8626A

REDUCING SIDE OUTLET TEES

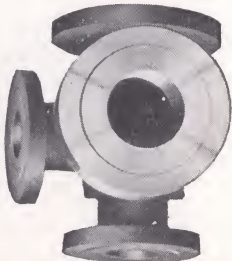
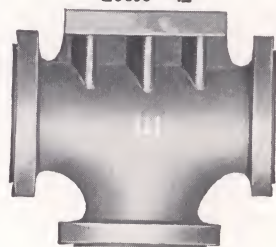


Fig. 8526C

Size In.	Diam. Flanges In.	Center to Face In.	Price, Each With Flanges Placed and Drilled With Flanges
4	10	7	42.00
5	11	8	47.00
6	12 1/2	8 1/2	53.50
7	14	9	63.00
8	15	10	72.50
10	17 1/2	11 1/2	102.00
12	20 1/2	13	131.00
14	23	15	159.00
16	25 1/2	16 1/2	184.00

All extra heavy fittings have a raised surface for gaskets 1/8 inch high, inside of bolt holes.

Made to order only.  
Dimension drawings should accompany orders or requests for prices.  
Prices upon application.



BASE TEES

Size In.	Diam. Flanges In.	Center to Face In.	Price, Each With Flanges Placed and Drilled With Flanges
4	10	7	47.00
5	11	8	52.00
6	12 1/2	8 1/2	59.00
7	14	9	70.50
8	15	10	80.00
10	17 1/2	11 1/2	112.00
12	20 1/2	13	146.00
14	23	15	174.00
16	25 1/2	16 1/2	204.00

All extra heavy fittings have a raised surface for gaskets 1/8 inch high, inside of bolt holes.

Y BRANCHES



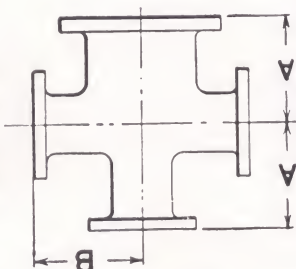
Made to order only.  
Dimension drawings should accompany order or requests for prices.  
Prices upon application.



# EXTRA HEAVY FLANGED FITTINGS

FOR STEAM WORKING PRESSURES UP TO 250 POUNDS

## CROSSES



DIMENSIONS



REDUCING

Fig. 38B



STRAIGHT

Fig. 38A

New Standard, effective Jan. 1, 1915.  
Recommended by the American Society  
of Mechanical Engineers, National Asso-  
ciation of Steam and Hot Water Fitters  
and Manufacturers' Committee.

## STRAIGHT SIZES

Size Inches	Diam. of Flanges Inches	Diam. to Face Inches	Price, Each
1 1/4	5	4 1/4	11.80
1 1/2	6	4 1/2	11.80
2	6 1/2	5	11.80
2 1/2	7 1/2	5 1/2	12.30
3	8 1/2	6	13.75
3 1/2	9	6 1/2	16.00
4	10	7	18.00
4 1/2	10 1/2	7 1/2	21.00
5	11	8	23.50
5 1/2	11 1/2	8 1/2	25.00
6	12 1/2	9	29.00
6 1/2	13	9 1/2	35.00
7	14	10	40.00
7 1/2	15	10 1/2	45.00
8	16 1/4	11 1/4	56.00
8 1/2	17 1/2	12 1/2	62.75
9	18 1/2	13	71.00
10	20 1/2	14 1/2	92.00
12	24 1/2	18 1/2	101.00
14	28 1/2	22 1/2	147.00
16	32 1/2	26 1/2	169.00
18	36 1/2	30 1/2	196.00
20	40 1/2	34 1/2	253.00
22	44 1/2	38 1/2	320.00
24	48 1/2	42 1/2	401.00
26	52 1/2	46 1/2	465.00
28	56 1/2	50 1/2	495.00

Size Inches	Diam. of Flanges Inches	Diam. to Face Inches	Price, Each
1 1/4	5	4 1/4	11.50
1 1/2	6	4 1/2	11.50
2	6 1/2	5	13.30
2 1/2	7 1/2	5 1/2	13.80
3	8 1/2	6	15.50
3 1/2	9	6 1/2	17.00
4	10	7	20.00
4 1/2	10 1/2	7 1/2	24.00
5	11	8	26.50
5 1/2	11 1/2	8 1/2	29.00
6	12 1/2	9	33.00
6 1/2	13	9 1/2	44.50
7	14	10	51.00
7 1/2	15	10 1/2	65.00
8	16 1/4	11 1/4	72.00
8 1/2	17 1/2	12 1/2	80.00
9	18 1/2	13	106.00
9 1/2	19 1/2	13 1/2	115.00
10	20 1/2	14 1/2	158.00
10 1/2	21 1/2	15 1/2	177.00
11	22 1/2	16 1/2	207.00
11 1/2	23 1/2	17 1/2	223.00
12	24 1/2	18 1/2	270.00
12 1/2	25 1/2	19 1/2	345.00
13	26 1/2	20 1/2	430.00
13 1/2	27 1/2	21 1/2	535.00
14	28 1/2	22 1/2	565.00

## REDUCING SIZES

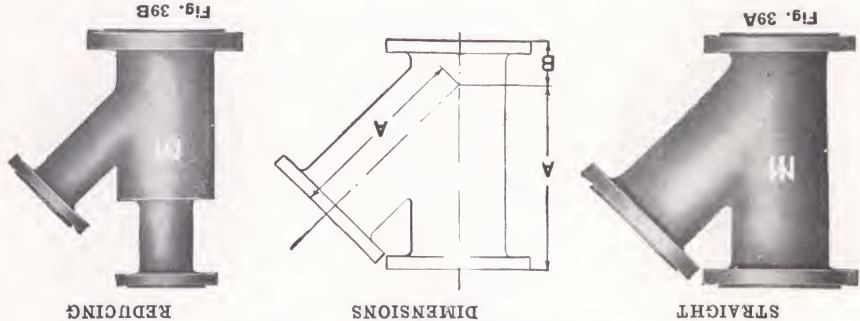
\*Flanges faced and drilled.  
Crosses, sizes 18 inches and larger, re-  
ducing on the outlet, are made in two  
lengths, depending on the size of the outlet.  
Both holes are drilled 1/8 inch larger in  
diameter than the diameter of the bolts.  
Sizes of all fittings scheduled, indicates  
the inside diameter of ports.  
Furnished faced only, unless otherwise  
specified on order.  
Larger sizes furnished to order. Prices  
upon application.

All reducing crosses, 16 inches and  
smaller, take the same, center to face  
dimensions as straight size crosses. All  
crosses, reducing on the run only, take  
the same dimensions, center to face, as the  
largest straight size.  
Furnished faced only, unless otherwise  
specified on order.

## EXTRA HEAVY FLANGED FITTINGS

FOR STEAM WORKING PRESSURES UP TO 250 POUNDS

## Y BRANCHES OR LATERALS



## REDUCING SIZES

## REDUCING IN RUN OR BRANCH

Price, Each With *Drilled Flanges	Price, Each Faced Flanges	Price, Each Faced Flanges	Diam. Center In.	Size of Flanges In.	Size Inches
13.30	11.50	10.00	2	6 1/2	2 1/2
13.80	12.00	10 1/2	3	7 1/2	3 1/2
15.50	13.25	11 1/4	4	8 3/4	4 1/2
18.00	15.50	12 1/2	5	9	5
20.00	17.00	13 1/2	6	10	6
24.00	21.00	14 1/2	7	11	7
26.50	23.50	15	8	12 1/2	8
33.00	29.00	17 1/2	9	14	9
36.00	33.00	20 1/2	10	15	10
44.50	40.00	22 1/2	11	16 1/4	11
51.00	46.00	24 1/2	12	17 1/2	12
71.75	65.00	27 1/2	13	18 1/2	13
80.00	72.00	28 1/2	14	19 1/2	14
115.00	106.00	31 1/2	15	20 1/2	15
169.00	158.00	33 1/2	16	21 1/2	16
191.00	177.00	34 1/2	17	22 1/2	17
223.00	207.00	36 1/2	18	23 1/2	18
288.00	270.00	40 1/2	19	24 1/2	19
365.00	345.00	43 1/2	20	26 1/2	20
456.00	430.00	46 1/2	21	28 1/2	21
565.00	535.00	47 1/2	22	30 1/2	22
			23	31 1/2	23
			24	33 1/2	24

## \*Flanges faced and drilled.

All reducing "Y" or laterals, 16 inches dimensions as the same center to face and smaller, take the same center to face size fittings.

Bolt holes are drilled 1/8 inch larger in diameter than the diameter of the bolts. Sizes of all fittings scheduled, indicates the inside diameter of ports.

Furnished faced only, unless otherwise specified on order. Larger sizes furnished to order. Prices upon application.

New Standard, effective Jan. 1, 1915. Recommended by the American Society of Mechanical Engineers, National Association of Steam and Hot Water Fitters and Manufacturers' Committee.

## STRAIGHT SIZES

Price, Each With Faced Flanges	Price, Each Faced Flanges	Price, Each Faced Flanges	Diam. Center In.	Size of Flanges In.	Size Inches
11.80	10.00	9	2	6 1/2	2 1/2
12.30	10.50	9 1/4	3	7 1/2	3 1/2
13.75	11.50	10 1/2	4	8 3/4	4 1/2
16.00	13.50	11 1/2	5	9	5
18.00	15.00	12 1/2	6	10	6
21.00	18.00	14 1/2	7	11	7
23.50	20.50	15 1/2	8	12 1/2	8
29.00	25.00	17 1/2	9	14	9
39.50	35.00	20 1/2	10	15	10
45.00	40.00	22 1/2	11	16 1/4	11
62.75	56.00	24 1/2	12	17 1/2	12
71.00	63.00	27 1/2	13	18 1/2	13
101.00	92.00	31 1/2	14	19 1/2	14
147.00	136.00	34 1/2	15	20 1/2	15
169.00	155.00	36 1/2	16	21 1/2	16
196.00	180.00	38 1/2	17	22 1/2	17
253.00	235.00	41 1/2	18	23 1/2	18
320.00	300.00	43 1/2	19	24 1/2	19
401.00	375.00	46 1/2	20	26 1/2	20
495.00	465.00	47 1/2	21	28 1/2	21
			22	30 1/2	22
			23	31 1/2	23
			24	33 1/2	24

## \*Flanges faced and drilled.

All laterals, reducing on run only, carry the same dimensions, face to face, as straight size laterals.

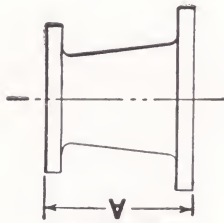
Sizes 18 inches, and up, reducing on the branch, are made in two lengths, depending on the size of the branch.

Furnished faced only, unless otherwise specified on order.

# EXTRA HEAVY FLANGED FITTINGS

FOR STEAM WORKING PRESSURES UP TO 250 POUNDS

## TAPER REDUCERS



ECCENTRIC

STANDARD

Fig. 296A

New Standard, effective Jan. 1, 1915.  
Recommended by the American Society  
of Mechanical Engineers, National Asso-  
ciation of Steam and Hot Water Fitters  
and Manufacturers' Committee.

Size Inches	Diam. of Flanges	Face to Face Inches	Face to Face With Drilled Flanges	Price, Each
3	8 1/2	6 1/2	11.35	15 x 8
3 1/2	9	7 1/2	13.50	15 x 10
4	10	8 1/2	15.00	18 x 8
4 1/2	10 1/2	9	15.00	18 x 10
5	11	10	18.75	20 x 8
5 1/2	11 1/2	10 1/2	20.25	20 x 10
6	12	11 1/2	22.75	22 x 8
6 1/2	12 1/2	12	24.75	22 x 10
7	13	13	27.75	24 x 8
7 1/2	13 1/2	13 1/2	27.75	24 x 10
8	14	14	31.50	26 x 8
8 1/2	14 1/2	14 1/2	31.50	26 x 10
9	15	15	33.75	28 x 8
9 1/2	15 1/2	15 1/2	33.75	28 x 10
10	16	16	38.50	30 x 8
10 1/2	16 1/2	16 1/2	38.50	30 x 10
11	17	17	44.00	32 x 8
11 1/2	17 1/2	17 1/2	44.00	32 x 10
12	18	18	48.00	34 x 8
12 1/2	18 1/2	18 1/2	48.00	34 x 10
13	19	19	55.00	36 x 8
13 1/2	19 1/2	19 1/2	55.00	36 x 10
14	20	20	61.00	38 x 8
14 1/2	20 1/2	20 1/2	61.00	38 x 10
15	21	21	68.00	40 x 8
15 1/2	21 1/2	21 1/2	68.00	40 x 10
16	22	22	75.00	42 x 8
16 1/2	22 1/2	22 1/2	75.00	42 x 10
17	23	23	84.00	44 x 8
17 1/2	23 1/2	23 1/2	84.00	44 x 10
18	24	24	88.50	46 x 8
18 1/2	24 1/2	24 1/2	88.50	46 x 10
19	25	25	92.00	48 x 8
19 1/2	25 1/2	25 1/2	92.00	48 x 10
20	26	26	100.00	50 x 8
20 1/2	26 1/2	26 1/2	100.00	50 x 10
21	27	27	110.00	52 x 8
21 1/2	27 1/2	27 1/2	110.00	52 x 10
22	28	28	120.00	54 x 8
22 1/2	28 1/2	28 1/2	120.00	54 x 10
23	29	29	130.00	56 x 8
23 1/2	29 1/2	29 1/2	130.00	56 x 10
24	30	30	140.00	58 x 8
24 1/2	30 1/2	30 1/2	140.00	58 x 10
25	31	31	150.00	60 x 8
25 1/2	31 1/2	31 1/2	150.00	60 x 10
26	32	32	160.00	62 x 8
26 1/2	32 1/2	32 1/2	160.00	62 x 10
27	33	33	170.00	64 x 8
27 1/2	33 1/2	33 1/2	170.00	64 x 10
28	34	34	180.00	66 x 8
28 1/2	34 1/2	34 1/2	180.00	66 x 10
29	35	35	190.00	68 x 8
29 1/2	35 1/2	35 1/2	190.00	68 x 10
30	36	36	200.00	70 x 8
30 1/2	36 1/2	36 1/2	200.00	70 x 10
31	37	37	210.00	72 x 8
31 1/2	37 1/2	37 1/2	210.00	72 x 10
32	38	38	220.00	74 x 8
32 1/2	38 1/2	38 1/2	220.00	74 x 10
33	39	39	230.00	76 x 8
33 1/2	39 1/2	39 1/2	230.00	76 x 10
34	40	40	240.00	78 x 8
34 1/2	40 1/2	40 1/2	240.00	78 x 10
35	41	41	250.00	80 x 8
35 1/2	41 1/2	41 1/2	250.00	80 x 10
36	42	42	260.00	82 x 8
36 1/2	42 1/2	42 1/2	260.00	82 x 10
37	43	43	270.00	84 x 8
37 1/2	43 1/2	43 1/2	270.00	84 x 10
38	44	44	280.00	86 x 8
38 1/2	44 1/2	44 1/2	280.00	86 x 10
39	45	45	290.00	88 x 8
39 1/2	45 1/2	45 1/2	290.00	88 x 10
40	46	46	300.00	90 x 8
40 1/2	46 1/2	46 1/2	300.00	90 x 10
41	47	47	310.00	92 x 8
41 1/2	47 1/2	47 1/2	310.00	92 x 10
42	48	48	320.00	94 x 8
42 1/2	48 1/2	48 1/2	320.00	94 x 10
43	49	49	330.00	96 x 8
43 1/2	49 1/2	49 1/2	330.00	96 x 10
44	50	50	340.00	98 x 8
44 1/2	50 1/2	50 1/2	340.00	98 x 10
45	51	51	350.00	100 x 8
45 1/2	51 1/2	51 1/2	350.00	100 x 10
46	52	52	360.00	102 x 8
46 1/2	52 1/2	52 1/2	360.00	102 x 10
47	53	53	370.00	104 x 8
47 1/2	53 1/2	53 1/2	370.00	104 x 10
48	54	54	380.00	106 x 8
48 1/2	54 1/2	54 1/2	380.00	106 x 10
49	55	55	390.00	108 x 8
49 1/2	55 1/2	55 1/2	390.00	108 x 10
50	56	56	400.00	110 x 8
50 1/2	56 1/2	56 1/2	400.00	110 x 10
51	57	57	410.00	112 x 8
51 1/2	57 1/2	57 1/2	410.00	112 x 10
52	58	58	420.00	114 x 8
52 1/2	58 1/2	58 1/2	420.00	114 x 10
53	59	59	430.00	116 x 8
53 1/2	59 1/2	59 1/2	430.00	116 x 10
54	60	60	440.00	118 x 8
54 1/2	60 1/2	60 1/2	440.00	118 x 10
55	61	61	450.00	120 x 8
55 1/2	61 1/2	61 1/2	450.00	120 x 10
56	62	62	460.00	122 x 8
56 1/2	62 1/2	62 1/2	460.00	122 x 10
57	63	63	470.00	124 x 8
57 1/2	63 1/2	63 1/2	470.00	124 x 10
58	64	64	480.00	126 x 8
58 1/2	64 1/2	64 1/2	480.00	126 x 10
59	65	65	490.00	128 x 8
59 1/2	65 1/2	65 1/2	490.00	128 x 10
60	66	66	500.00	130 x 8
60 1/2	66 1/2	66 1/2	500.00	130 x 10
61	67	67	510.00	132 x 8
61 1/2	67 1/2	67 1/2	510.00	132 x 10
62	68	68	520.00	134 x 8
62 1/2	68 1/2	68 1/2	520.00	134 x 10
63	69	69	530.00	136 x 8
63 1/2	69 1/2	69 1/2	530.00	136 x 10
64	70	70	540.00	138 x 8
64 1/2	70 1/2	70 1/2	540.00	138 x 10
65	71	71	550.00	140 x 8
65 1/2	71 1/2	71 1/2	550.00	140 x 10
66	72	72	560.00	142 x 8
66 1/2	72 1/2	72 1/2	560.00	142 x 10
67	73	73	570.00	144 x 8
67 1/2	73 1/2	73 1/2	570.00	144 x 10
68	74	74	580.00	146 x 8
68 1/2	74 1/2	74 1/2	580.00	146 x 10
69	75	75	590.00	148 x 8
69 1/2	75 1/2	75 1/2	590.00	148 x 10
70	76	76	600.00	150 x 8
70 1/2	76 1/2	76 1/2	600.00	150 x 10
71	77	77	610.00	152 x 8
71 1/2	77 1/2	77 1/2	610.00	152 x 10
72	78	78	620.00	154 x 8
72 1/2	78 1/2	78 1/2	620.00	154 x 10
73	79	79	630.00	156 x 8
73 1/2	79 1/2	79 1/2	630.00	156 x 10
74	80	80	640.00	158 x 8
74 1/2	80 1/2	80 1/2	640.00	158 x 10
75	81	81	650.00	160 x 8
75 1/2	81 1/2	81 1/2	650.00	160 x 10
76	82	82	660.00	162 x 8
76 1/2	82 1/2	82 1/2	660.00	162 x 10
77	83	83	670.00	164 x 8
77 1/2	83 1/2	83 1/2	670.00	164 x 10
78	84	84	680.00	166 x 8
78 1/2	84 1/2	84 1/2	680.00	166 x 10
79	85	85	690.00	168 x 8
79 1/2	85 1/2	85 1/2	690.00	168 x 10
80	86	86	700.00	170 x 8
80 1/2	86 1/2	86 1/2	700.00	170 x 10
81	87	87	710.00	172 x 8
81 1/2	87 1/2	87 1/2	710.00	172 x 10
82	88	88	720.00	174 x 8
82 1/2	88 1/2	88 1/2	720.00	174 x 10
83	89	89	730.00	176 x 8
83 1/2	89 1/2	89 1/2	730.00	176 x 10
84	90	90	740.00	178 x 8
84 1/2	90 1/2	90 1/2	740.00	178 x 10
85	91	91	750.00	180 x 8
85 1/2	91 1/2	91 1/2	750.00	180 x 10
86	92	92	760.00	182 x 8
86 1/2	92 1/2	92 1/2	760.00	182 x 10
87	93	93	770.00	184 x 8
87 1/2	93 1/2	93 1/2	770.00	184 x 10
88	94	94	780.00	186 x 8
88 1/2	94 1/2	94 1/2	780.00	186 x 10
89	95	95	790.00	188 x 8
89 1/2	95 1/2	95 1/2	790.00	188 x 10
90	96	96	800.00	190 x 8
90 1/2	96 1/2	96 1/2	800.00	190 x 10
91	97	97	810.00	192 x 8
91 1/2	97 1/2	97 1/2	810.00	192 x 10
92	98	98	820.00	194 x 8
92 1/2	98 1/2	98 1/2	820.00	194 x 10
93	99	99	830.00	196 x 8
93 1/2	99 1/2	99 1/2	830.00	196 x 10
94	100	100	840.00	198 x 8
94 1/2	100 1/2	100 1/2	840.00	198 x 10
95	101	101	850.00	200 x 8
95 1/2	101 1/2	101 1/2	850.00	200 x 10
96	102	102	860.00	202 x 8
96 1/2	102 1/2	102 1/2	860.00	202 x 10
97	103	103	870.00	204 x 8
97 1/2	103 1/2	103 1/2	870.00	204 x 10
98	104	104	880.00	206 x 8
98 1/2	104 1/2	104 1/2	880.00	206 x 10
99	105	105	890.00	208 x 8
99 1/2	105 1/2	105 1/2	890.00	208 x 10
100	106	106	900.00	210 x 8
100 1/2	106 1/2	106 1/2	900.00	210 x 10
101	107	107	910.00	212 x 8
101 1/2	107 1/2	107 1/2	910.00	212 x 10
102	108	108	920.00	214 x 8
102 1/2	108 1/2	108 1/2	920.00	214 x 10
103	109	109	930.00	216 x 8
103 1/2	109 1/2	109 1/2	930.00	216 x 10
104	110	110	940.00	218 x 8
104 1/2	110 1/2	110 1/2	940.00	218 x 10
105	111	111	950.00	220 x 8
105 1/2	111 1/2	111 1/2	950.00	220 x 10
106	112	112	960.00	222 x 8
106 1/2	112 1/2	112 1/2	960.00	222 x 10
107	113	113	970.00	224 x 8
107 1/2	113 1/2	113 1/2	970.00	224 x 10
108	114	114	980.00	226 x 8
108 1/2	114 1/2	114 1/2	980.00	226 x 10
109	115	115	990.00	228 x 8
109 1/2	115 1/2	115 1/2	990.00	228 x 10
110	116	116	1000.00	230 x 8
110 1/2	116 1/2	116 1/2	1000.00	230 x 10
111	117	117	1010.00	232 x 8
111 1/2	117 1/2	117 1/2	1010.00	232 x 10
112	118	118	1020.00	234 x 8
112 1/2	118 1/2	118 1/2	1020.00	234 x 10
113	119	119	1030.00	236 x 8
113 1/2	119 1/2	119 1/2	1030.00	236 x 10
114	120	120	1040.00	238 x 8
114 1/2	120 1/2	120 1/2	1040.00	238 x 10
115	121	121	1050.00	240 x 8
115 1/2	121 1/2	121 1/2	1050.00	240 x 10
116	122	122	1060.00	242 x 8
116 1/2	122 1/2	122 1/2	1060.00	242 x 10
117	123	123	1070.00	244 x 8
117 1/2	123 1/2	123 1/2	1070.00	



## EXTRA HEAVY FLANGED FITTINGS

FOR STEAM WORKING PRESSURES UP TO 250 POUNDS

### TAPER REDUCERS



Fig. 296A

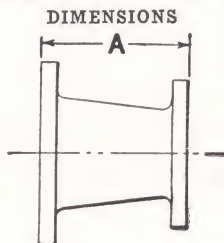


Fig. 296B

New Standard, effective Jan. 1, 1915. Recommended by the American Society of Mechanical Engineers, National Association of Steam and Hot Water Fitters and Manufacturers' Committee.

Size Inches	Diam. of Flanges Inches	Face to Face Inches	PRICE, EACH With Faced Flanges	*Drilled Flanges
3 x 2	8 1/4 x 6 1/2	6	10.25	11.35
3 1/2 x 2 1/2	9 x 7 1/2	6 1/2	12.25	13.50
4 x 2	10 x 6 1/2	7	13.50	15.00
4 x 2 1/2	10 x 7 1/2	7	13.50	15.00
4 x 3	10 x 8 1/4	7	13.50	15.00
5 x 2	11 x 6 1/2	8	18.75	20.25
5 x 2 1/2	11 x 7 1/2	8	18.75	20.25
5 x 3	11 x 8 1/4	8	18.75	20.25
5 x 4	11 x 10	8	18.75	20.25
6 x 3	12 1/2 x 8 1/4	9	22.75	24.75
6 x 3 1/2	12 1/2 x 9	9	22.75	24.75
6 x 4	12 1/2 x 10	9	22.75	24.75
6 x 5	12 1/2 x 11	9	22.75	24.75
7 x 3	14 x 8 1/4	10	31.50	33.75
7 x 4	14 x 10	10	31.50	33.75
7 x 5	14 x 11	10	31.50	33.75
7 x 6	14 x 12 1/2	10	31.50	33.75
8 x 3	15 x 8 1/4	11	36.00	38.50
8 x 4	15 x 10	11	36.00	38.50
8 x 5	15 x 11 1/2	11	36.00	38.50
8 x 6	15 x 12 1/2	11	36.00	38.50
10 x 4	17 1/2 x 10	12	57.00	61.00
10 x 5	17 1/2 x 11	12	57.00	61.00
10 x 6	17 1/2 x 12 1/2	12	57.00	61.00
10 x 8	17 1/2 x 15	12	57.00	61.00
12 x 5	20 1/2 x 11	14	84.00	88.50
12 x 6	20 1/2 x 12 1/2	14	84.00	88.50
12 x 8	20 1/2 x 15	14	84.00	88.50
12 x 10	20 1/2 x 17 1/2	14	84.00	88.50
14 x 6	23 x 12 1/2	16	105.00	110.50
14 x 8	23 x 15	16	105.00	110.50
14 x 10	23 x 17 1/2	16	105.00	110.50
14 x 12	23 x 20 1/2	16	105.00	110.50

\*Flanges faced and drilled.

\*Flanges faced and drilled.

Bolt holes will be drilled 1/8-inch larger in diameter than the diameter of the bolts. Bolt holes will always straddle center line. The face to face dimensions, standard or eccentric, will be the same.

Flanged taper reducers of any other dimensions on special order.

Furnished faced only, unless otherwise specified on order.

### ECCENTRIC REDUCERS

Eccentric Taper Reducers furnished upon special order. Prices upon application.

# EXTRA HEAVY FLANGED FITTINGS

FOR STEAM WORKING PRESSURES UP TO 250 POUNDS

## SINGLE SWEEP TEES

STRAIGHT

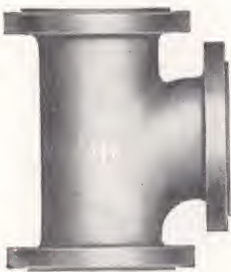
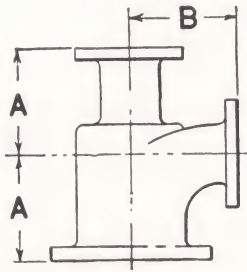


Fig. 18A

DIMENSIONS



REDUCING



Fig. 18B

New Standard, effective Jan. 1, 1915.  
Recommended by the American Society  
of Mechanical Engineers, National Association  
of Steam and Hot Water Fitters  
and Manufacturers' Committee.

### STRAIGHT SIZES

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH With Faced Flanges	*With Drilled Flanges
2	6 1/2	5	7.50	8.85
2 1/2	7 1/2	5 1/2	8.00	9.35
3	8 1/4	6	8.60	10.25
3 1/2	9	6 1/2	10.25	12.15
4	10	7	11.25	13.50
4 1/2	10 1/2	7 1/2	13.75	16.00
5	11	8	15.50	17.75
6	12 1/2	8 1/2	19.00	22.00
7	14	9	26.50	29.85
8	15	10	30.00	33.75
9	16 1/4	10 1/2	42.50	47.50
10	17 1/2	11 1/2	47.75	53.75
12	20 1/2	13	70.00	76.75
14	23	15	103.50	111.75
15	24 1/2	15 1/2	117.00	127.00
16	25 1/2	16 1/2	137.00	149.00
18	28	18	177.00	191.00
20	30 1/2	19 1/2	225.00	240.00
22	33	20 1/2	285.00	305.00
24	36	22 1/2	350.00	373.00

\*Flanges faced and drilled.

All reducing tees, 16 inches and smaller, take the same center to face dimensions as straight size tees, all tees reducing on the run only, take the same dimensions, center to face, as the largest straight size tees, sizes 18 inches and larger, and reducing on the outlet, are made in two lengths, depending on the size of the reduced outlet.

### REDUCING SIZES

Reducing in run or branch.

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH With Faced Flanges	*With Drilled Flanges
2	6 1/2	5	8.50	9.95
2 1/2	7 1/2	5 1/2	9.15	10.50
3	8 1/4	6	9.90	11.55
3 1/2	9	6 1/2	11.75	13.65
4	10	7	13.00	15.25
4 1/2	10 1/2	7 1/2	15.75	18.00
5	11	8	17.85	20.10
6	12 1/2	8 1/2	22.00	25.00
7	14	9	30.50	33.85
8	15	10	34.50	38.25
9	16 1/4	10 1/2	49.00	54.00
10	17 1/2	11 1/2	55.00	61.00
12	20 1/2	13	80.00	86.75
14	23	15	119.00	127.25
15	24 1/2	15 1/2	135.00	145.00
16	25 1/2	16 1/2	158.00	170.00
18	28	18	204.00	218.00
20	30 1/2	19 1/2	260.00	275.00
22	33	20 1/2	327.00	347.00
24	36	22 1/2	402.00	425.00

\*Flanges faced and drilled.

Reducing single sweep tees made to order only. Single sweep tees with the side openings larger than the run are not made.

Bullheads or tees having outlet larger than the run will be the same length center to face of all openings as a tee with all openings of the size of the outlet.

Furnished faced only, unless otherwise specified on order.

Larger sizes, furnished to order. Prices upon application.

## EXTRA HEAVY FLANGED FITTINGS

FOR STEAM WORKING PRESSURES UP TO 250 POUNDS

### DOUBLE SWEEP TEES



Fig. 9929A

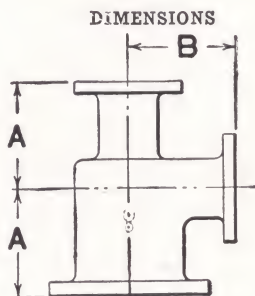


Fig. 9929B

New Standard effective Jan, 1 1915.  
Recommended by the American Society  
of Mechanical Engineers, National, Asso-  
ciation of Steam and Hot Water Fitters  
and Manufacturers' Committee.

#### STRAIGHT SIZES

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH With Faced Flanges	With *Drilled Flanges
2	6½	5	7.50	8.85
2½	7½	5½	8.00	9.35
3	8¼	6	8.60	10.25
3½	9	6½	10.25	12.15
4	10	7	11.25	13.50
4½	10½	7½	13.75	16.00
5	11	8	15.50	17.75
6	12½	8½	19.00	22.00
7	14	9	26.50	29.85
8	15	10	30.00	33.75
9	16¼	10½	42.50	47.50
10	17½	11½	47.75	53.75
12	20½	13	70.00	76.75
14	23	15	103.50	111.75
15	24½	15½	117.00	127.00
16	25½	16½	137.00	149.00
18	28	18	177.00	191.00
20	30½	19½	225.00	240.00
22	33	20½	285.00	305.00
24	36	22½	350.00	373.00

\*Flanges faced and drilled.

All reducing tees reducing on the outlet, 16 inches and smaller, take the same center to face dimensions as straight size tees.

All tees reducing on the run only, take the same dimensions, center to face, as the next largest straight size.

Furnished faced only, unless otherwise specified on order.

#### REDUCING SIZES REDUCING IN BRANCH ONLY

Size Inches	Diam. of Flanges Inches	Center to Face Inches	PRICE, EACH With Faced Flanges	With *Drilled Flanges
2	6½	5	8.60	9.95
2½	7½	5½	9.15	10.50
3	8¼	6	9.90	11.55
3½	9	6½	11.75	13.65
4	10	7	13.00	15.25
4½	10½	7½	15.75	18.00
5	11	8	17.85	20.10
6	12½	8½	22.00	25.00
7	14	9	30.50	33.85
8	15	10	34.50	38.25
9	16¼	10½	49.00	54.00
10	17½	11½	55.00	61.00
12	20½	13	80.00	86.75
14	23	15	119.00	127.25
15	24½	15½	135.00	145.00
16	25½	16½	158.00	170.00
18	28	18	204.00	218.00
20	30½	19½	260.00	275.00
22	33	20½	327.00	347.00
24	36	22½	402.00	425.00

\*Flanges faced and drilled.

Tees, sizes 18 inches and larger, reducing on the outlet, are made in two lengths, each depending on the size of outlet.

Double sweep tees are not made reducing on the run. Should such tees, however be wanted, the patterns can be altered (which will be expensive) and charge at a special price.

The branch (outlet) can only be increased within a reasonable limit, which must be regulated by the patterns.



## EXTRA HEAVY COMPANION AND BLIND FLANGES

FOR STEAM WORKING PRESSURES UP TO 250 POUNDS

AMERICAN STANDARD—EFFECTIVE JAN. 1, 1915

### COMPANION FLANGES

Back View, Showing Hub



Fig. 8632A

Raised Face



Fig. 8632B

### CAST IRON BLIND FLANGES

16-inch O. D. and Smaller



Fig. 8632C

17½-inch O. D. and Larger



Fig. 8632D

Size Inches	CAST IRON PRICE, EACH		MALLEABLE IRON PRICE, EACH	
	Faced	Faced and Drilled	Faced	Faced and Drilled
1 x 4½	.95	1.30	.....	.....
1¼ x 5	1.00	1.35	.....	.....
1½ x 6	1.10	1.45	2.20	2.90
2 x 6½	1.25	1.60	2.50	3.20
2½ x 7½	1.40	1.75	2.80	3.50
3 x 8¼	1.60	2.05	3.20	4.10
3½ x 9	2.00	2.55	4.00	5.10
4 x 10	2.25	2.95	4.50	5.90
4½ x 10½	2.40	3.10	4.80	6.20
5 x 11	2.65	3.35	5.30	6.70
6 x 12½	3.30	4.05	6.60	8.10
7 x 14	4.40	5.30	8.80	10.60
8 x 15	5.10	6.15	10.20	12.30
9 x 16¼	6.30	7.50	12.60	15.00
10 x 17½	7.40	8.90	14.80	17.80
12 x 20½	10.75	12.50	21.50	25.00
14 x 23	15.00	17.00	30.00	34.00
15 x 24½	19.00	21.50	38.00	43.00
16 x 25½	22.25	25.00	44.50	50.00
18 x 28	26.00	29.00	.....	.....
20 x 30½	31.00	35.00	.....	.....
22 x 33	36.00	41.00	.....	.....
24 x 36	45.00	50.00	.....	.....

All flanges faced but not drilled unless otherwise specified.

### ECCENTRIC FLANGES

Made to order only.

Prices upon application.

All extra heavy flanges have a raised surface for gaskets ⅛-inch high, inside of bolt holes.

Size Inches	PRICE, EACH	
	Faced	Faced and Drilled
1½ x 6	1.65	2.00
2 x 6½	1.90	2.25
2½ x 7½	2.10	2.45
3 x 8¼	2.40	2.85
3½ x 9	3.00	3.55
4 x 10	3.35	4.05
4½ x 10½	3.60	4.30
5 x 11	4.00	4.70
6 x 12½	5.00	5.75
7 x 14	6.60	7.50
8 x 15	7.65	8.70
9 x 16¼	9.50	10.70
10 x 17½	11.00	12.50
12 x 20½	16.00	17.75
14 x 23	22.50	24.50
15 x 24½	28.50	31.00
16 x 25½	33.50	36.25
18 x 28	39.00	42.00
20 x 30½	46.00	50.00
22 x 33	54.00	59.00
24 x 36	67.00	72.00

All flanges faced but not drilled unless otherwise ordered.

Spot facing bolt holes, price 10 cents per hole.

Sizes 14 inches and larger are tapped to be used with outside diameter pipe of the same size.

## EXTRA HEAVY REDUCING COMPANION FLANGES

WITH RIBS

FOR EXTRA HEAVY FLANGED VALVES AND FITTINGS  
FOR STEAM WORKING PRESSURES UP TO 250 POUNDS



Fig. 8634A

These flanges, used in connection with straight or reducing fittings, enable us to fill orders more promptly. Customers who desire fittings reduced in this manner will please specify "Reduce by Flanges if Necessary."

These flanges will always be of the same thickness as the regular companion flanges of corresponding outside diameters, and drilled to the template corresponding to the outside diameter, unless otherwise ordered.

In ordering reducing companion flanges always give the screwed or reduced size first, then the outside diameter of flange wanted; for instance, if a reducing flange is wanted to connect a 6-inch pipe to a 9-inch flanged valve or fitting having a 16 $\frac{1}{4}$ -inch O.D. flange, order a 6x16 $\frac{1}{4}$ -inch reducing flange. This will clearly avoid the confusion often caused by orders incorrectly calling for 9x6 or a 6x9-inch flange.

New standard effective January 1, 1915. Recommended by the American Society of Mechanical Engineers, National Association of Master Steam and Hot Water Fitters and Manufacturers Committee.

Size In.	PRICE, EACH Faced and Drilled		Size In.	PRICE, EACH Faced and Drilled	
	Faced	Drilled		Faced	Drilled
1 $\frac{1}{4}$ x6	1.80	2.15	1 $\frac{1}{2}$ x10	3.70	4.40
1 $\frac{1}{2}$ x6 $\frac{1}{2}$	2.10	2.45	2 x10	3.70	4.40
1 $\frac{1}{2}$ x7 $\frac{1}{2}$	2.30	2.65	2 $\frac{1}{2}$ x10	3.70	4.40
2 x7 $\frac{1}{2}$	2.30	2.65	3 x10	3.70	4.40
2 $\frac{1}{2}$ x8 $\frac{1}{4}$	2.65	3.10	3 $\frac{1}{2}$ x10	3.70	4.40
2 x8 $\frac{1}{4}$	2.65	3.10	1 $\frac{1}{2}$ x10 $\frac{1}{2}$	4.00	4.70
2 $\frac{1}{2}$ x8 $\frac{1}{4}$	2.65	3.10	2 x10 $\frac{1}{2}$	4.00	4.70
1 $\frac{1}{2}$ x9	3.30	3.85	2 $\frac{1}{2}$ x10 $\frac{1}{2}$	4.00	4.70
2 x9	3.30	3.85	3 x10 $\frac{1}{2}$	4.00	4.70
2 $\frac{1}{2}$ x9	3.30	3.85	3 $\frac{1}{2}$ x10 $\frac{1}{2}$	4.00	4.70
3 x9	3.30	3.85	4 x10 $\frac{1}{2}$	4.00	4.70

All extra heavy flanges have a raised surface for gaskets  $\frac{1}{16}$ -inch high, inside of bolt holes.

Size In.	PRICE, EACH Faced and Drilled		Size In.	PRICE, EACH Faced and Drilled	
	Faced	Drilled		Faced	Drilled
1 $\frac{1}{2}$ x11	4.40	5.10	5 x17 $\frac{1}{2}$	12.00	13.50
2 x11	4.40	5.10	6 x17 $\frac{1}{2}$	12.00	13.50
2 $\frac{1}{2}$ x11	4.40	5.10	7 x17 $\frac{1}{2}$	12.00	13.50
3x11	4.40	5.10	8 x17 $\frac{1}{2}$	12.00	13.50
3 $\frac{1}{2}$ x11	4.40	5.10	9 x17 $\frac{1}{2}$	12.00	13.50
4x11	4.40	5.10	22 $\frac{1}{2}$ x20 $\frac{1}{2}$	17.50	19.25
4 $\frac{1}{2}$ x11	4.40	5.10	3 x20 $\frac{1}{2}$	17.50	19.25
1 $\frac{1}{2}$ x12 $\frac{1}{2}$	5.50	6.25	3 $\frac{1}{2}$ x20 $\frac{1}{2}$	17.50	19.25
2 x12 $\frac{1}{2}$	5.50	6.25	4 x20 $\frac{1}{2}$	17.50	19.25
2 $\frac{1}{2}$ x12 $\frac{1}{2}$	5.50	6.25	5 x20 $\frac{1}{2}$	17.50	19.25
3 x12 $\frac{1}{2}$	5.50	6.25	6 x20 $\frac{1}{2}$	17.50	19.25
4 x12 $\frac{1}{2}$	5.50	6.25	7 x20 $\frac{1}{2}$	17.50	19.25
4 $\frac{1}{2}$ x12 $\frac{1}{2}$	5.50	6.25	8 x20 $\frac{1}{2}$	17.50	19.25
5x12 $\frac{1}{2}$	5.50	6.25	9 x20 $\frac{1}{2}$	17.50	19.25
2x14	7.25	8.15	10x20 $\frac{1}{2}$	17.50	19.25
2 $\frac{1}{2}$ x14	7.25	8.15	6x23	25.00	27.00
3x14	7.25	8.15	8x23	25.00	27.00
3 $\frac{1}{2}$ x14	7.25	8.15	9x23	25.00	27.00
4x14	7.25	8.15	10x23	25.00	27.00
4 $\frac{1}{2}$ x14	7.25	8.15	12x23	25.00	27.00
5 x14	7.25	8.15	8x24 $\frac{1}{2}$	31.50	34.00
6 x14	7.25	8.15	10x24 $\frac{1}{2}$	31.50	34.00
1 $\frac{1}{2}$ x15	8.40	9.45	12x24 $\frac{1}{2}$	31.50	34.00
2 x15	8.40	9.45	14x24 $\frac{1}{2}$	31.50	34.00
2 $\frac{1}{2}$ x15	8.40	9.45	10x25 $\frac{1}{2}$	37.00	39.75
3 x15	8.40	9.45	12x25 $\frac{1}{2}$	37.00	39.75
3 $\frac{1}{2}$ x15	8.40	9.45	14x25 $\frac{1}{2}$	37.00	39.75
4x15	8.40	9.45	15x25 $\frac{1}{2}$	37.00	39.75
4 $\frac{1}{2}$ x15	8.40	9.45	12x28	43.00	46.00
5x15	8.40	9.45	14x28	43.00	46.00
6x15	8.40	9.45	15x28	43.00	46.00
7x15	8.40	9.45	16x28	43.00	46.00
3 x16 $\frac{1}{2}$	10.50	11.70	14x30 $\frac{1}{2}$	51.00	55.00
4 x16 $\frac{1}{2}$	10.50	11.70	15x30 $\frac{1}{2}$	51.00	55.00
5 x16 $\frac{1}{2}$	10.50	11.70	16x30 $\frac{1}{2}$	51.00	55.00
6 x16 $\frac{1}{2}$	10.50	11.70	18x30 $\frac{1}{2}$	51.00	55.00
7 x16 $\frac{1}{2}$	10.50	11.70	16x33	60.00	65.00
8 x16 $\frac{1}{2}$	10.50	11.70	18x33	60.00	65.00
2 x17 $\frac{1}{2}$	12.00	13.50	20x33	60.00	65.00
2 $\frac{1}{2}$ x17 $\frac{1}{2}$	12.00	13.50	18x36	74.00	79.00
3 x17 $\frac{1}{2}$	12.00	13.50	20x36	74.00	79.00
4 x17 $\frac{1}{2}$	12.00	13.50	.....	.....	.....

Furnished faced only, unless otherwise ordered.

Sizes 14 inches and larger are tapped to be used with 14-inch outside diameter pipe of the same sizes.

Spot facing bolt holes, price, 10 cents per hole.

# TEMPLATES AND PRICES FOR DRILLING EXTRA HEAVY FLANGED VALVES AND FITTINGS

## SIZES, 1-INCH TO 48-INCH INCLUSIVE

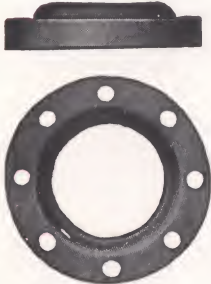


Fig. 8685A

These drilling templates are in multiples of four, so that fittings may be made to face in any quarter, and bolt holes straddle the center line. They can be drilled to any other template, if so desired.

Bolt holes are drilled  $\frac{1}{8}$  inch larger than nominal diameter of bolts, except that brass valves and fittings, 6-inch and smaller, have holes  $\frac{1}{16}$  inch larger than the bolts.

New Standard, Effective January 1, 1915

Recommended by the American Society of Mechanical Engineers, National Association of Master Steam and Hot Water Fitters and Manufacturers' Committee.

Size Inches	Diam. of Flanges Inches	Thickness of Flanges Inches	Bolt Circle Inches	No. of Bolts	Size of Bolts Inches	Bolt Lengths Inches	PRICE, EACH, FOR DRILLING With Two Flanges Except Angle Valves			Cross Valves
							Angle	Valves		
1	4 $\frac{1}{2}$	1 $\frac{1}{16}$	3 $\frac{1}{4}$	4	1 $\frac{1}{2}$	2	.60	1.00		1.20
1 $\frac{1}{4}$	5	1 $\frac{3}{16}$	3 $\frac{3}{4}$	4	1 $\frac{1}{2}$	2 $\frac{1}{4}$	.60	1.00		1.20
1 $\frac{1}{2}$	6	1 $\frac{3}{8}$	4 $\frac{1}{2}$	4	1 $\frac{5}{8}$	2 $\frac{1}{2}$	.60	1.00		1.20
2	6 $\frac{1}{2}$	1 $\frac{7}{8}$	5	4	1 $\frac{5}{8}$	2 $\frac{1}{2}$	.75	1.25		1.50
2 $\frac{1}{2}$	7 $\frac{1}{2}$	1	5 $\frac{7}{8}$	4	1 $\frac{3}{4}$	3	.75	1.25		1.50
3	8 $\frac{1}{4}$	1 $\frac{1}{8}$	6 $\frac{5}{8}$	8	1 $\frac{3}{4}$	3 $\frac{1}{4}$	.75	1.25		1.50
3 $\frac{1}{2}$	9	1 $\frac{3}{8}$	7 $\frac{1}{4}$	8	1 $\frac{3}{4}$	3 $\frac{1}{4}$	1.00	1.50		2.00
4	10	1 $\frac{1}{4}$	7 $\frac{7}{8}$	8	1 $\frac{3}{4}$	3 $\frac{1}{2}$	1.25	1.75		2.50
4 $\frac{1}{2}$	10 $\frac{1}{2}$	1 $\frac{5}{16}$	8 $\frac{1}{2}$	8	1 $\frac{3}{4}$	3 $\frac{1}{2}$	1.50	2.00		3.00
5	11	1 $\frac{3}{8}$	9 $\frac{1}{4}$	8	1 $\frac{3}{4}$	3 $\frac{3}{4}$	1.50	2.00		3.00
6	12 $\frac{1}{2}$	1 $\frac{7}{16}$	10 $\frac{5}{8}$	12	1 $\frac{3}{4}$	3 $\frac{3}{4}$	1.75	2.50		3.50
7	14	1 $\frac{1}{2}$	11 $\frac{1}{8}$	12	1 $\frac{7}{8}$	4	2.25	3.00		4.50
8	15	1 $\frac{5}{8}$	12	12	1 $\frac{7}{8}$	4 $\frac{1}{4}$	2.25	3.00		4.50
9	16 $\frac{1}{4}$	1 $\frac{3}{4}$	14	12	1	4 $\frac{3}{4}$	2.50	3.50		5.00
10	17 $\frac{1}{2}$	1 $\frac{7}{8}$	15 $\frac{1}{4}$	16	1	5	2.50	3.50		5.00
12	20 $\frac{1}{2}$	2	17 $\frac{3}{4}$	16	1 $\frac{1}{8}$	5 $\frac{1}{2}$	3.50	5.00		7.00
14	23	2 $\frac{1}{8}$	20 $\frac{1}{4}$	20	1 $\frac{1}{8}$	5 $\frac{3}{4}$	4.00	6.00		8.00
15	24 $\frac{1}{2}$	2 $\frac{3}{16}$	21 $\frac{1}{2}$	20	1 $\frac{1}{4}$	6	4.50	6.50		9.00
16	25 $\frac{1}{2}$	2 $\frac{1}{4}$	22 $\frac{1}{2}$	20	1 $\frac{1}{4}$	6	5.00	7.00		....
18	28	2 $\frac{3}{8}$	24 $\frac{3}{4}$	24	1 $\frac{1}{4}$	6 $\frac{1}{4}$	6.00	....		....
20	30 $\frac{1}{2}$	2 $\frac{1}{2}$	27	24	1 $\frac{3}{8}$	6 $\frac{3}{4}$	7.50	....		....
22	33	2 $\frac{5}{8}$	29 $\frac{1}{4}$	24	1 $\frac{1}{2}$	7	9.00	....		....
24	36	2 $\frac{3}{4}$	32	24	1 $\frac{5}{8}$	7 $\frac{1}{2}$	10.00	....		....
26	38 $\frac{1}{4}$	2 $\frac{9}{16}$	34 $\frac{1}{2}$	28	1 $\frac{5}{8}$	8	....	....		....
28	40 $\frac{3}{4}$	2 $\frac{1}{2}$	37	28	1 $\frac{5}{8}$	8	....	....		....
30	43	3	39 $\frac{1}{4}$	28	1 $\frac{3}{4}$	8 $\frac{1}{2}$	12.00	....		....
32	45 $\frac{1}{4}$	3 $\frac{1}{8}$	41 $\frac{1}{2}$	28	1 $\frac{7}{8}$	9	....	....		....
34	47 $\frac{1}{2}$	3 $\frac{1}{4}$	43 $\frac{1}{2}$	28	1 $\frac{7}{8}$	9	....	....		....
36	50	3 $\frac{3}{8}$	46	32	1 $\frac{7}{8}$	9 $\frac{1}{2}$	....	....		....
38	52 $\frac{1}{4}$	3 $\frac{7}{16}$	48	32	1 $\frac{7}{8}$	9 $\frac{1}{2}$	....	....		....
40	54 $\frac{1}{2}$	3 $\frac{9}{16}$	50 $\frac{1}{4}$	36	1 $\frac{7}{8}$	10	....	....		....
42	57	3 $\frac{1}{2}$	52 $\frac{3}{4}$	36	1 $\frac{7}{8}$	10	....	....		....
44	59 $\frac{1}{4}$	3 $\frac{3}{4}$	55	36	2	10 $\frac{1}{2}$	....	....		....
46	61 $\frac{1}{2}$	3 $\frac{7}{8}$	57 $\frac{1}{4}$	40	2	10 $\frac{1}{2}$	....	....		....
48	65	4	60 $\frac{3}{4}$	40	2	11	....	....		....



## EXTRA HEAVY FLANGED FITTINGS AND FLANGES

### EXTRA PRICE FOR GALVANIZING

Galvanized Extra Heavy, Cast Iron Flanged Fittings will be made to order at an advance over the black price as below.

Size In.	Flanged Taper Reducers	Flanged Elbows	Reducing Flanged Elbows	Flanged 45° Elbows
1 1/4	3.00	3.00	3.00	3.00
1 1/2	3.00	3.00	3.00	3.00
2	3.00	3.00	3.00	3.00
2 1/2	3.10	3.10	3.10	3.10
3	3.50	3.50	3.50	3.50
3 1/2	4.10	4.10	4.10	4.10
4	4.50	4.50	4.50	4.50
4 1/2	5.50	5.50	5.50	5.50
5	6.00	6.00	6.00	6.00
6	7.50	7.50	7.50	7.50
7	10.00	10.00	10.00	10.00
8	11.25	11.25	11.25	11.25
9	16.00	16.00	16.00	16.00
10	18.00	18.00	18.00	18.00
12	26.00	26.00	26.00	26.00
14	37.50	37.50	37.50	37.50
15	44.00	44.00	44.00	44.00
16	50.00	50.00	50.00	50.00

Galvanized Extra Heavy, Cast Iron Flanged Fittings will be made to order at an advance over the black price as below.

Size In.	Flanged Long Radius Elbows	Flanged Base Elbows	Flanged Tees	Flanged Reducing Tees
1 1/4	4.50	4.50	4.50	4.50
1 1/2	4.50	4.50	4.50	4.50
2	4.50	4.50	4.50	4.50
2 1/2	4.65	4.65	4.65	4.65
3	5.25	5.25	5.25	5.25
3 1/2	6.15	6.15	6.15	6.15
4	6.75	6.75	6.75	6.75
4 1/2	8.25	8.25	8.25	8.25
5	9.00	9.00	9.00	9.00
6	11.25	11.25	11.25	11.25
7	15.00	15.00	15.00	15.00
8	16.75	16.75	16.75	16.75
9	24.00	24.00	24.00	24.00
10	27.00	27.00	27.00	27.00
12	39.00	39.00	39.00	39.00
14	56.00	56.00	56.00	56.00
15	66.00	66.00	66.00	66.00
16	75.00	75.00	75.00	75.00

Size In.	Flanged Crosses	Reducing Flanged Crosses	Flanged Laterals	Reducing Flanged Laterals	Size In.	Companion Flanges	REDUCING COMPANION FLANGES Diam. In. Price Each	BLIND FLANGES Diam. In. Price Each
1 1/4	6.00	6.00	6.00	6.00	1 1/4	.85	.....	.....
1 1/2	6.00	6.00	6.00	6.00	1 1/2	.85	6	1.25
2	6.00	6.00	6.00	6.00	2	1.00	6 1/2	1.50
2 1/2	6.25	6.25	6.25	6.25	2 1/2	1.05	7 1/2	1.60
3	7.00	7.00	7.00	7.00	3	1.15	8 1/4	1.75
3 1/2	8.25	8.25	8.25	8.25	3 1/2	1.40	9	2.10
4	9.00	9.00	9.00	9.00	4	1.65	10	2.50
4 1/2	11.00	11.00	11.00	11.00	4 1/2	1.75	10 1/2	2.65
5	12.00	12.00	12.00	12.00	5	1.90	11	2.85
6	15.00	15.00	15.00	15.00	6	2.30	12 1/2	3.50
7	20.00	20.00	20.00	20.00	7	3.00	14	4.50
8	22.50	22.50	22.50	22.50	8	3.50	15	5.25
9	32.00	32.00	32.00	32.00	9	4.15	16 1/4	6.25
10	36.00	36.00	36.00	36.00	10	5.25	17 1/2	8.00
12	52.00	52.00	52.00	52.00	12	7.00	20 1/2	10.50
14	75.00	75.00	75.00	75.00	14	10.00	23	15.00
15	88.00	88.00	88.00	88.00	15	12.50	24 1/2	19.00
16	100.00	100.00	100.00	100.00	16	15.00	25 1/2	22.50

## COMPANION FLANGES

### EXTRA FOR FACING EXTRA HEAVY COMPANION FLANGES

Male Face



Fig. 8636A

Tongued Face



Fig. 8636B

Raised Face



Fig. 8636C

Female Face



Fig. 8636D

Grooved Face



Fig. 8636E

Calking Recessed



Fig. 8636F

Size In.	Male or Female Face	Tongued or Grooved Face	$\frac{1}{8}$ -inch Raised Face for Grinding	For Calking Recess
1 x 4 $\frac{1}{2}$	1.75	1.75	1.75	1.75
1 $\frac{1}{4}$ x 5	1.75	1.75	1.75	1.75
1 $\frac{1}{2}$ x 6	1.75	1.75	1.75	1.75
2 x 6 $\frac{1}{2}$	1.75	1.75	1.75	1.75
2 $\frac{1}{2}$ x 7 $\frac{1}{2}$	2.35	2.35	2.35	2.35
3 x 8 $\frac{1}{4}$	2.35	2.35	2.35	2.35
3 $\frac{1}{2}$ x 9	2.35	2.35	2.35	2.35
4 x 10	2.35	2.35	2.35	2.35
4 $\frac{1}{2}$ x 10 $\frac{1}{2}$	2.35	2.35	2.35	2.35
5 x 11	2.35	2.35	2.35	2.35
6 x 12 $\frac{1}{2}$	2.85	2.85	2.85	2.85
7 x 14	2.85	2.85	2.85	2.85

Size In.	Male or Female Face	Tongued or Grooved Face	$\frac{1}{8}$ -inch Raised Face for Grinding	For Calking Recess
8x15	3.60	3.60	3.60	3.60
9x16 $\frac{1}{4}$	3.60	3.60	3.60	3.60
10x17 $\frac{1}{2}$	3.60	3.60	3.60	3.60
12x20 $\frac{1}{2}$	4.50	4.50	4.50	4.50
14x23	5.75	5.75	5.75	5.75
15x24 $\frac{1}{2}$	5.75	5.75	5.75	5.75
16x25 $\frac{1}{2}$	7.15	7.15	7.15	7.15
18x28	9.00	9.00	9.00	9.00
20x30 $\frac{1}{2}$	10.85	10.85	10.85	10.85
22x33	14.35	14.35	14.35	14.35
24x36	18.00	18.00	18.00	18.00

### EXTRA FOR ATTACHING COM- PANION FLANGES STANDARD AND EXTRA HEAVY

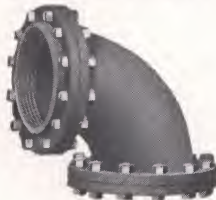


Fig. 8636G

Size Inches,	Price Labor only	Size Inches	Price Labor only
1 $\frac{1}{4}$	.35	8	.55
1 $\frac{1}{2}$	.35	9	.75
2	.35	10	.75
2 $\frac{1}{2}$	.35	12	.75
3	.35	14	.75
3 $\frac{1}{2}$	.35	15	.95
4	.35	16	.95
4 $\frac{1}{2}$	.55	18	.95
5	.55	20	.95
6	.55	22	.95
7	.55	24	.95

### EXTRA FOR FURNISHING AND BOLTING ON WOODEN PROTECTORS STANDARD AND EXTRA HEAVY



Fig. 8636H

Size Inches	Price, Inc. Two Bolts Each Flange	Size Inches	Price, Inc. Two Bolts, Each Flange
1 $\frac{1}{4}$	.75	8	1.15
1 $\frac{1}{2}$	.75	9	1.15
2	.75	10	1.35
2 $\frac{1}{2}$	.75	12	1.35
3	.95	14	1.55
3 $\frac{1}{2}$	.95	15	1.55
4	.95	16	1.75
4 $\frac{1}{2}$	.95	18	1.75
5	.95	20	1.95
6	.95	22	1.95
7	1.15	24	1.95

Sizes above 24 inches, prices on application. The above prices apply to both straight and reducing flanged fittings, flanges and valves. Gaskets will be furnished only when specified and at an extra price.

## EXTRA HEAVY CAST IRON REDUCING FLANGED FITTINGS

### LIST OF SIZES

#### REDUCING FLANGED TEES

$2\frac{1}{2}x2\frac{1}{2}x2$	5 x5 x3 $\frac{1}{2}$	7x 7x3	10x10x 2
$2\frac{1}{2}x2\frac{1}{2}x1\frac{1}{2}$	5 x5 x3	7x 7x2	10x 8x10
$2\frac{1}{2}x2\frac{1}{2}x1\frac{1}{4}$	5 x5 x2 $\frac{1}{2}$	7x 6x7	10x 6x10
$2\frac{1}{2}x2$ x2	5 x5 x2	7x 6x6	10x 8x 8
3 x3 x2 $\frac{1}{2}$	5 x5 x1 $\frac{1}{2}$	7x 5x5	10x 8x 6
3 x3 x2	5 x4 x5	6x 6x7	10x 8x 5
3 x3 x1 $\frac{1}{2}$	5 x3 x5		10x 6x 8
3 x3 x1 $\frac{1}{4}$	5 x2 $\frac{1}{2}$ x5	8x 8x7	10x 6x 6
3 x3 x1	5 x4 x4	8x 8x6	8x 8x10
3 x2 $\frac{1}{2}$ x3	5 x4 x3	8x 8x5	7x 7x10
3 x2 x3	5 x4 x2 $\frac{1}{2}$	8x 8x4 $\frac{1}{2}$	
3 x1 $\frac{1}{2}$ x3	5 x3 x4	8x 8x4	12x12x10
3 x1 $\frac{1}{4}$ x3	5 x3 x3	8x 8x3 $\frac{1}{2}$	12x12x 9
3 x2 $\frac{1}{2}$ x2 $\frac{1}{2}$	4 x4 x5	8x 8x3	12x12x 8
3 x2 x2		8x 8x2 $\frac{1}{2}$	12x12x 7
2 x2 x3		8x 8x2	12x12x6
	6 x6 x5	8x 8x8	12x12x 5
	6 x6 x4 $\frac{1}{2}$	8x 6x8	12x12x 4
	6 x6 x4	8x 4x8	12x12x 3
$3\frac{1}{2}x3\frac{1}{2}x2\frac{1}{2}$	6 x6 x3 $\frac{1}{2}$	8x 3x8	12x12x 2 $\frac{1}{2}$
$3\frac{1}{2}x3\frac{1}{2}x2$	6 x6 x3	8x 7x6	12x10x12
$3\frac{1}{2}x2\frac{1}{2}x3\frac{1}{2}$	6 x6 x2 $\frac{1}{2}$	8x 7x5	12x 8x12
4 x4 x3 $\frac{1}{2}$	6 x6 x2	8x 6x7	12x10x10
4 x4 x3	6 x5 x6	8x 6x6	12x10x 8
4 x4 x2 $\frac{1}{2}$	6 x4 x6	8x 6x5	12x10x 6
4 x4 x2	6 x3 x6	8x 6x4	12x 8x 8
4 x4 x1 $\frac{1}{2}$	6 x2 $\frac{1}{2}$ x6	8x 5x6	12x 8x 6
4 x3 x4	6 x5 x5	8x 5x5	10x10x12
4 x2 $\frac{1}{2}$ x4	6 x5 x4	8x 4x6	8x 8x12
4 x2 x4	6 x5 x3	8x 4x4	
4 x3 x3	6 x5 x2 $\frac{1}{2}$	6x 6x8	
4 x3 x2	6 x5 x2	5x 5x8	14x14x12
4 x3 x1 $\frac{1}{2}$	6 x4 x5	9x 9x6	14x14x10
4 x2 $\frac{1}{2}$ x2 $\frac{1}{2}$	6 x4 x4	9x 9x5	14x14x 8
4 x2 x3	6 x4 x3		14x14x 7
3 x3 x4	6 x3 x3	10x10x8	14x14x 6
$2\frac{1}{2}x2\frac{1}{2}x4$	5 x5 x6	10x10x7	14x14x 5
	$4\frac{1}{2}x4\frac{1}{2}x6$	10x10x6	14x12x 8
$4\frac{1}{2}x4\frac{1}{2}x3$	4 x4 x6	10x10x5	
$4\frac{1}{2}x4\frac{1}{2}x2$		10x10x4 $\frac{1}{2}$	16x16x10
$4\frac{1}{2}x4$ x4 $\frac{1}{2}$		10x10x4	16x16x 8
5 x5 x4	7 x7 x6	10x10x3 $\frac{1}{2}$	16x16x 7
	7 x7 x5	10x10x3	16x16x 6
	7 x7 x4		

(Continued on following page.)



## EXTRA HEAVY CAST IRON FLANGED FITTINGS

### REDUCING SINGLE SWEEP FLANGED TEES

4 x 4 x 2½	6 x 6 x 4	8 x 8 x 6
4 x 4 x 2	6 x 4 x 4	8 x 6 x 6

### REDUCING DOUBLE SWEEP FLANGED TEES

5 x 5 x 4	6 x 6 x 3	8 x 8 x 5
5 x 5 x 3	8 x 8 x 6	.....

### REDUCING FLANGED CROSSES

3 x 3 x 2½ x 2½	8 x 8 x 6 x 6
4 x 4 x 2½ x 2½	8 x 8 x 5 x 5
6 x 6 x 4 x 4	8 x 8 x 4 x 4
6 x 6 x 3 x 3	.....

### REDUCING FLANGED LATERALS

4 x 4 x 2½	6 x 6 x 2½
------------	------------

These sizes, as listed with special reducing companion flanges, enable us to furnish almost every variety of fittings required, except special angles, offsets, etc.

Reducing flanges are listed on another page. These flanges will always be the same thickness as the regular companion flanges of corresponding outside diameter.

The flanges are always drilled to the template corresponding to the outside diameter, unless otherwise ordered.

Customers who desire fittings reduced in this manner will please specify "REDUCE BY FLANGES IF NECESSARY."

### PRICES OF SIZES NOT SHOWN

Sizes not covered in the list of sizes will be considered special, and made to order at the following advance in prices, according to the quantity of a size ordered at one time, viz.:

Add to the Regular List Prices of Reducing Flanged Fittings  
the Percentage Advances Given Below

Size	One Piece	Two Pieces	Three Pieces	Four Pieces	Five Pieces	Six or More
3½-inch and Smaller	50%	40%	30%	20%	10%	No Advance
4 to 8-inch	25%	20%	15%	10%	5%	" "

Sizes 9-inch and larger, will be made to order in quantities of one or more of a size, at the regular list and discount.

## GASKETS

FOR STANDARD AND LOW PRESSURE FLANGED VALVES AND FITTINGS

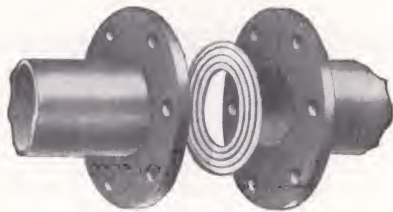


Fig. 8702A

## RING GASKETS

Size Valve or Fitting In.	Inside and Outside Diam. In.	PRICE, EACH	
		$\frac{1}{8}$ -inch Cloth Insertion	Corrugated Copper Gasket
$\frac{3}{4}$	$\frac{3}{4}$ x $2\frac{1}{8}$	.05	.15
1	1 x $2\frac{3}{16}$	.05	.16
$1\frac{1}{4}$	$1\frac{1}{4}$ x $2\frac{5}{16}$	.07	.17
$1\frac{1}{2}$	$1\frac{1}{2}$ x $3\frac{3}{8}$	.07	.18
2	2 x $4\frac{1}{8}$	.07	.21
$2\frac{1}{2}$	$2\frac{1}{2}$ x $4\frac{7}{8}$	.09	.27
3	3 x $5\frac{3}{8}$	.12	.31
$3\frac{1}{2}$	$3\frac{1}{2}$ x $6\frac{3}{8}$	.14	.47
4	4 x $6\frac{7}{8}$	.16	.52
$4\frac{1}{2}$	$4\frac{1}{2}$ x 7	.16	.52
5	5 x $7\frac{3}{4}$	.19	.55
6	6 x $8\frac{3}{4}$	.23	.65
7	7 x 10	.28	.80
8	8 x 11	.30	.90
9	9 x $12\frac{1}{2}$	.37	1.20
10	10 x $13\frac{3}{8}$	.42	1.30
12	12 x $16\frac{1}{8}$	.58	1.90
14	14 x $17\frac{3}{4}$	.70	1.90
15	15 x 19	.75	2.15
16	16 x $20\frac{1}{4}$	.82	2.40
18	18 x $21\frac{5}{8}$	.86	2.40
20	20 x $23\frac{7}{8}$	1.02	2.75
22	22 x 26	1.10	3.05
24	24 x $28\frac{1}{4}$	1.40	3.50
26	26 x $30\frac{1}{2}$	1.62	....
28	28 x $32\frac{3}{4}$	1.85	....
30	30 x $34\frac{5}{8}$	2.10	....
32	32 x 37	2.30	....
34	34 x 39	2.65	....
36	36 x $41\frac{1}{4}$	2.90	....
38	38 x $43\frac{5}{8}$	3.10	....
40	40 x $45\frac{5}{8}$	3.35	....
42	42 x $47\frac{7}{8}$	3.50	....

## FULL FACE GASKETS

Size Valve or Fitting In.	Inside and Outside Diam. In.	PRICE, EACH	
		$\frac{1}{8}$ -inch Cloth Insertion	Corrugated Copper Gasket
$\frac{3}{4}$	$\frac{3}{4}$ x $3\frac{1}{2}$	.10	.18
1	1 x 4	.10	.25
$1\frac{1}{4}$	$1\frac{1}{4}$ x $4\frac{1}{2}$	.14	.30
$1\frac{1}{2}$	$1\frac{1}{2}$ x 5	.14	.35
2	2 x 6	.18	.50
$2\frac{1}{2}$	$2\frac{1}{2}$ x 7	.23	.67
3	3 x $7\frac{1}{2}$	.28	.75
$3\frac{1}{2}$	$3\frac{1}{2}$ x $8\frac{1}{2}$	.30	.95
4	4 x 9	.35	1.05
$4\frac{1}{2}$	$4\frac{1}{2}$ x $9\frac{1}{4}$	.37	1.05
5	5 x 10	.42	1.20
6	6 x 11	.47	1.35
7	7 x $12\frac{1}{2}$	.58	1.70
8	8 x $13\frac{1}{2}$	.65	1.85
9	9 x 15	.81	2.25
10	10 x 16	.88	2.45
12	12 x 19	1.15	3.40
14	14 x 21	1.30	3.85
15	15 x $22\frac{1}{4}$	1.50	4.25
16	16 x $23\frac{1}{2}$	1.65	4.65
18	18 x 25	1.85	4.75
20	20 x $27\frac{1}{2}$	2.00	5.60
22	22 x $29\frac{1}{2}$	2.10	6.10
24	24 x 32	2.55	....
26	26 x $34\frac{1}{4}$	3.25	....
28	28 x $36\frac{1}{2}$	3.45	....
30	30 x $38\frac{3}{4}$	3.80	....
32	32 x $41\frac{3}{4}$	4.15	....
34	34 x $43\frac{3}{4}$	4.65	....
36	36 x 46	5.10	....

Ring gaskets will always be furnished, unless otherwise ordered.

The commercial corrugated copper gasket is made from 27-gauge sheet copper, and this gauge will be furnished on all orders for low pressure or standard copper gaskets. We can furnish these gaskets made from heavier sheet copper at an extra price. We can furnish gaskets made from other commercial sheet packings or metals.

Full face gaskets are furnished without bolt holes; bolt holes will be punched at an extra price when so ordered.

## GASKETS

FOR MEDIUM AND EXTRA HEAVY FLANGED VALVES AND FITTINGS  
RING GASKETS

Size Valve or Fitting Inches	Inside and Outside Diameter Inches	PRICE, EACH	
		Imco Special	Corrugated Copper
1	1 x 2 $\frac{3}{4}$	.17	.17
1 $\frac{1}{4}$	1 $\frac{1}{4}$ x 3 $\frac{1}{4}$	.17	.18
1 $\frac{1}{2}$	1 $\frac{1}{2}$ x 3 $\frac{7}{8}$	.17	.21
2	2 x 4 $\frac{3}{8}$	.19	.24
2 $\frac{1}{2}$	2 $\frac{1}{2}$ x 5 $\frac{1}{8}$	.25	.31
3	3 x 5 $\frac{7}{8}$	.32	.43
3 $\frac{1}{2}$	3 $\frac{1}{2}$ x 6 $\frac{1}{8}$	.35	.47
4	4 x 7 $\frac{1}{8}$	.38	.58
4 $\frac{1}{2}$	4 $\frac{1}{2}$ x 7 $\frac{3}{4}$	.44	.62
5	5 x 8 $\frac{1}{2}$	.52	.75
6	6 x 9 $\frac{7}{8}$	.63	1.00
7	7 x 11	.85	1.15
8	8 x 12 $\frac{1}{8}$	.90	1.35
9	9 x 13	1.00	1.40
10	10 x 14 $\frac{1}{4}$	1.15	1.65
12	12 x 16 $\frac{5}{8}$	1.50	2.15
14	14 x 19 $\frac{1}{8}$	2.10	2.75
15	15 x 20 $\frac{1}{4}$	2.20	2.90
16	16 x 21 $\frac{1}{4}$	2.50	3.25
18	18 x 23 $\frac{1}{2}$	2.85	3.60
20	20 x 25 $\frac{5}{8}$	3.05	3.95
22	22 x 27 $\frac{3}{4}$	3.25	4.50
24	24 x 30 $\frac{3}{8}$	4.00	....

## FULL FACE GASKETS

1	1 x 4 $\frac{1}{2}$	.38	.30
1 $\frac{1}{4}$	1 $\frac{1}{4}$ x 5	.38	.36
1 $\frac{1}{2}$	1 $\frac{1}{2}$ x 6	.38	.54
2	2 x 6 $\frac{1}{2}$	.45	.60
2 $\frac{1}{2}$	2 $\frac{1}{2}$ x 7 $\frac{1}{2}$	.55	.80
3	3 x 8 $\frac{1}{4}$	.67	.95
3 $\frac{1}{2}$	3 $\frac{1}{2}$ x 9	.75	1.10
4	4 x 10	.95	1.30
4 $\frac{1}{2}$	4 $\frac{1}{2}$ x 10 $\frac{1}{2}$	1.00	1.40
5	5 x 11	1.05	1.50
6	6 x 12 $\frac{1}{2}$	1.25	1.90
7	7 x 14	1.55	2.30
8	8 x 15	1.70	2.55
9	9 x 16 $\frac{1}{4}$	2.00	2.90
10	10 x 17 $\frac{1}{2}$	2.20	3.25
12	12 x 20 $\frac{1}{2}$	2.95	4.35
14	14 x 23	3.55	5.15
15	15 x 24 $\frac{1}{2}$	4.00	5.90
16	16 x 25 $\frac{1}{2}$	4.20	6.20
18	18 x 28	4.60	7.25
20	20 x 30 $\frac{1}{2}$	5.25	....
22	22 x 33	5.85	....
24	24 x 36	6.60	....

Ring gaskets cover the faces of flanges inside of bolt holes, and will always be furnished unless otherwise ordered.

Full face gaskets are furnished without bolt holes; bolt holes will be punched at extra price when ordered.

GASKETS FOR MALE AND  
FEMALE JOINTS

Size Valve or Fitting Inches	Inside and Outside Diameter Inches	PRICE, EACH	
		Imco Special	Corrugated Copper
1	1 x 2 $\frac{5}{8}$	.11	.16
1 $\frac{1}{4}$	1 $\frac{1}{4}$ x 2 $\frac{3}{4}$	.11	.17
1 $\frac{1}{2}$	1 $\frac{1}{2}$ x 3 $\frac{1}{8}$	.11	.18
2	2 x 3 $\frac{5}{8}$	.11	.19
2 $\frac{1}{2}$	2 $\frac{1}{2}$ x 4 $\frac{1}{8}$	.13	.21
3	3 x 5	.17	.29
3 $\frac{1}{2}$	3 $\frac{1}{2}$ x 5 $\frac{1}{2}$	.21	.32
4	4 x 6	.23	.38
4 $\frac{1}{2}$	4 $\frac{1}{2}$ x 6 $\frac{1}{2}$	.28	.47
5	5 x 7 $\frac{1}{4}$	.32	.55
6	6 x 8 $\frac{3}{8}$	.35	.65
7	7 x 9 $\frac{3}{8}$	.42	.80
8	8 x 10 $\frac{3}{8}$	.52	.90
9	9 x 11 $\frac{3}{8}$	.57	1.20
10	10 x 12 $\frac{3}{4}$	.67	1.20
12	12 x 15 $\frac{1}{4}$	.92	1.75
14	14 x 16 $\frac{1}{2}$	1.00	1.90
15	15 x 17 $\frac{1}{2}$	1.05	2.00
16	16 x 18 $\frac{1}{2}$	1.20	2.15
18	18 x 21	1.45	2.35
20	20 x 23	1.70	2.75
22	22 x 25 $\frac{1}{2}$	2.10	3.00
24	24 x 27 $\frac{1}{2}$	2.40	3.40

GASKETS FOR TONGUED AND  
GROOVED JOINTS

1	1 $\frac{3}{4}$ x 2 $\frac{1}{2}$	.07	.17
1 $\frac{1}{4}$	2 $\frac{1}{8}$ x 3	.07	.18
1 $\frac{1}{2}$	2 $\frac{3}{4}$ x 3 $\frac{5}{8}$	.07	.19
2	3 $\frac{1}{8}$ x 4 $\frac{1}{8}$	.07	.21
2 $\frac{1}{2}$	3 $\frac{5}{8}$ x 4 $\frac{5}{8}$	.09	.29
3	4 $\frac{1}{4}$ x 5 $\frac{1}{4}$	.11	.29
3 $\frac{1}{2}$	4 $\frac{3}{4}$ x 5 $\frac{3}{4}$	.11	.35
4	5 $\frac{1}{4}$ x 6 $\frac{1}{4}$	.13	.42
4 $\frac{1}{2}$	5 $\frac{3}{4}$ x 6 $\frac{3}{4}$	.13	.45
5	5 $\frac{1}{4}$ x 7 $\frac{1}{4}$	.13	.55
6	7 $\frac{1}{2}$ x 8 $\frac{1}{2}$	.15	.65
7	8 $\frac{5}{8}$ x 9 $\frac{5}{8}$	.17	.80
8	9 $\frac{5}{8}$ x 10 $\frac{7}{8}$	.23	.90
9	10 $\frac{5}{8}$ x 11 $\frac{7}{8}$	.25	1.20
10	11 $\frac{5}{8}$ x 13 $\frac{1}{8}$	.32	1.20
12	13 $\frac{5}{8}$ x 15 $\frac{1}{8}$	.38	1.75
14	15 $\frac{7}{8}$ x 17 $\frac{3}{8}$	.42	1.90
15	17 $\frac{1}{8}$ x 18 $\frac{5}{8}$	.46	2.15
16	18 $\frac{3}{8}$ x 20 $\frac{1}{8}$	.60	2.40
18	20 $\frac{5}{8}$ x 22 $\frac{3}{8}$	.75	2.75
20	22 $\frac{5}{8}$ x 24 $\frac{5}{8}$	.85	2.90
22	24 $\frac{1}{2}$ x 26 $\frac{1}{2}$	.95	3.40
24	26 $\frac{1}{2}$ x 28 $\frac{1}{2}$	1.05	3.50

Corrugated copper gaskets are made from 27 gauge copper. Can be furnished made from a heavier gauge of copper, at extra price, with either plain or corrugated faces, and hard or annealed.

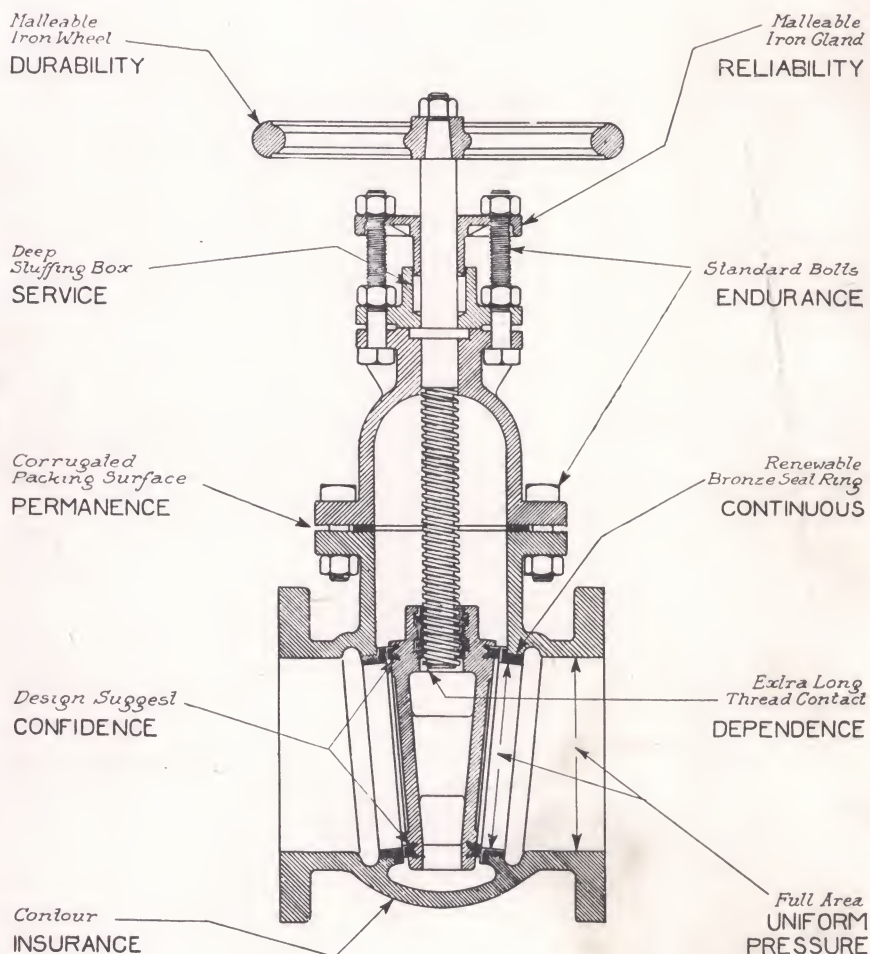


# IMICO STANDARD IRON BODY GATE VALVES

## NON-RISING STEM WEDGE GATE—BRASS TRIMMINGS

For Steam Working Pressures Up to 125 Pounds  
For Water Working Pressures Up to 175 Pounds

### SECTIONAL VIEW



A VALVE OF QUALITY

# IMICO STANDARD IRON BODY GATE VALVES

## NON-RISING STEM

### WEDGE GATE—BRASS TRIMMINGS



Fig. 8738A

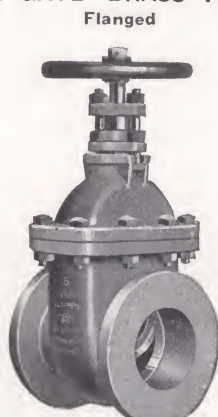


Fig. 8738B

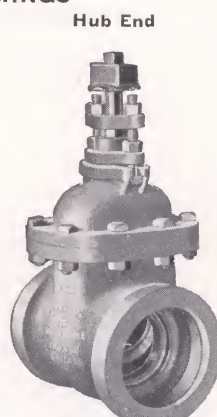


Fig. 8738C

### SCREWED OR FLANGED

For Steam Working Pressure up to 125 Pounds  
For Water Working Pressure up to 175 Pounds

Size Inches	End to End Screwed Inches	Face to Face Flanged Inches	Center to Top Inches	Diam- eter Flanges Inches	Thickness of Flange Inches	Diam- eter Wheel Inches	PRICE, EACH	
							Screwed	Flanged
2	5 $\frac{11}{16}$	7	11 $\frac{3}{4}$	6	5 $\frac{5}{8}$	6 $\frac{1}{2}$	10.00	12.00
2 $\frac{1}{2}$	5 $\frac{7}{8}$	7 $\frac{1}{2}$	12 $\frac{3}{4}$	7	1 $\frac{1}{16}$	6 $\frac{1}{2}$	11.50	13.50
3	6 $\frac{3}{8}$	8	14 $\frac{1}{4}$	7 $\frac{1}{2}$	3 $\frac{3}{4}$	7 $\frac{1}{2}$	14.00	16.50
3 $\frac{1}{2}$	6 $\frac{7}{8}$	8 $\frac{1}{2}$	15 $\frac{1}{2}$	8 $\frac{1}{2}$	1 $\frac{3}{16}$	7 $\frac{1}{2}$	17.00	19.50
4	7 $\frac{1}{2}$	9	16 $\frac{3}{4}$	9	1 $\frac{5}{16}$	9	19.00	23.00
4 $\frac{1}{2}$	7 $\frac{3}{4}$	9 $\frac{1}{2}$	17 $\frac{3}{8}$	9 $\frac{1}{4}$	1 $\frac{5}{16}$	9	24.00	28.00
5	8	10	19	10	1 $\frac{5}{16}$	10	27.50	31.50
6	8 $\frac{1}{2}$	10 $\frac{1}{2}$	20 $\frac{3}{4}$	11	1	12	32.50	36.50
7	9	11	...	12 $\frac{1}{2}$	1 $\frac{1}{16}$	12	45.00	49.00
8	9 $\frac{5}{8}$	11 $\frac{1}{2}$	23	13 $\frac{1}{2}$	1 $\frac{1}{8}$	14	54.00	58.00
10	11 $\frac{3}{8}$	13	30	16	1 $\frac{3}{16}$	16	90.00	95.00
12	12 $\frac{1}{2}$	14	33 $\frac{7}{8}$	19	1 $\frac{5}{16}$	18	125.00	133.00

Valves will be shipped faced only unless otherwise ordered.

### HUB ENDS

For Water Working Pressure up to 175 Pounds

Size Inches	End to End Inches	End to End of Pipe Inches	Inside Diameter of Hub Inches	Price Each
2	8 $\frac{1}{2}$	3 $\frac{1}{4}$	3 $\frac{1}{4}$	10.00
3	9	4	4 $\frac{1}{2}$	14.00
4	9 $\frac{1}{2}$	4 $\frac{1}{2}$	5.80	19.00
5	...	...	...	27.50
6	11 $\frac{3}{4}$	5 $\frac{3}{4}$	7.90	32.50
7	...	...	...	45.00
8	12 $\frac{1}{8}$	6 $\frac{1}{4}$	10	54.00
10	13	7 $\frac{1}{2}$	12	90.00
12	13 $\frac{1}{4}$	8 $\frac{1}{4}$	14 $\frac{1}{8}$	125.00

Valves regularly furnished open to the left.

### ALL IRON GATE VALVES

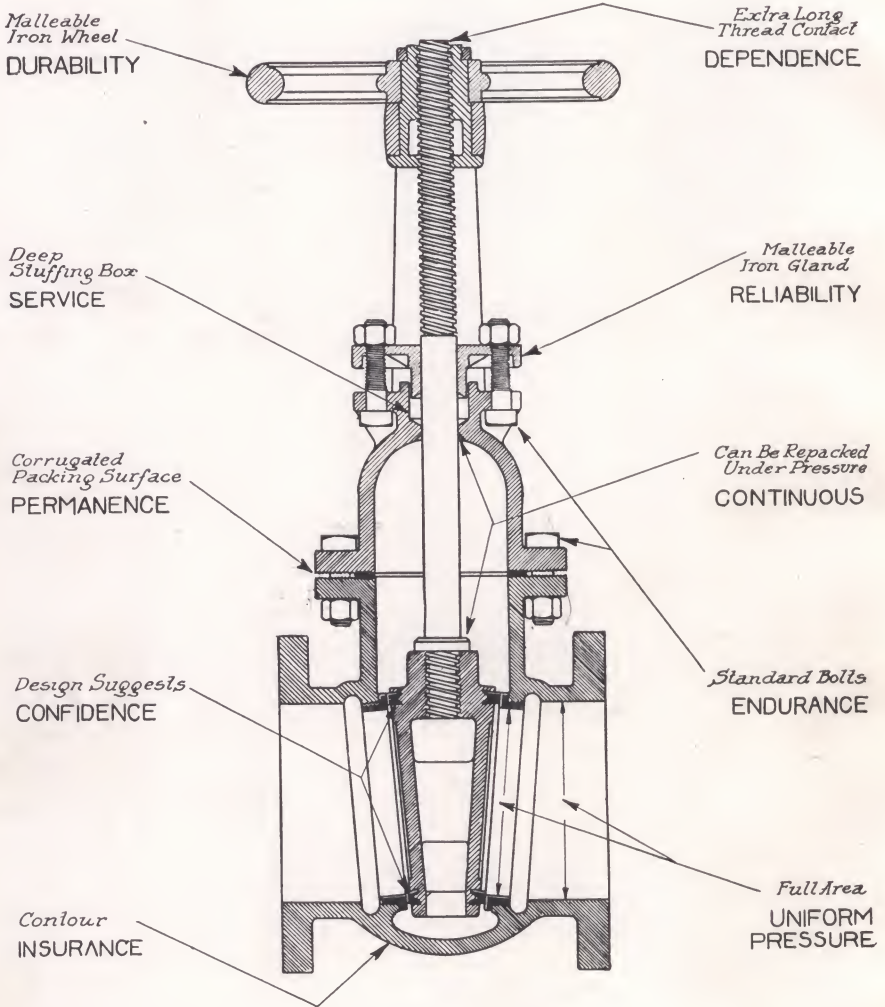
All iron gate valves same list as brass mounted.

# IMICO STANDARD IRON BODY GATE VALVES

## OUTSIDE SCREW AND YOKE WEDGE GATE—BRASS TRIMMINGS

For Steam Working Pressures Up to 125 Pounds  
For Water Working Pressures Up to 175 Pounds

### SECTIONAL VIEW



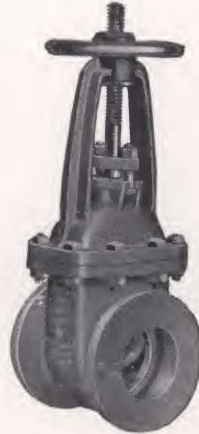
A VALVE OF QUALITY



**IMICO STANDARD IRON BODY GATE VALVES****OUTSIDE SCREW AND YOKE  
WEDGE GATE—BRASS TRIMMINGS**

For Steam Working Pressure up to 125 Pounds

For Water Working Pressure up to 175 Pounds

**Screwed****Fig. 8740A****Flanged****Fig. 8740B**

Size Inches	End to End Screwed Inches	Face to Face Flanged Inches	Center to Top—Rising Stem Closed Inches	Center to Top—Rising Stem Open Inches	Diam- eter Wheel Inches	Diam- eter Flange Inches	Thick- ness of Flange Inches
2	5 $\frac{11}{16}$	7	11 $\frac{3}{4}$	14 $\frac{1}{2}$	6 $\frac{1}{2}$	6	$\frac{5}{8}$
2 $\frac{1}{2}$	5 $\frac{7}{8}$	7 $\frac{1}{2}$	13 $\frac{1}{2}$	16 $\frac{1}{2}$	6 $\frac{1}{2}$	7	$\frac{11}{16}$
3	6 $\frac{3}{8}$	8	15 $\frac{1}{2}$	19 $\frac{1}{2}$	7 $\frac{1}{2}$	7 $\frac{1}{2}$	$\frac{3}{4}$
3 $\frac{1}{2}$	6 $\frac{7}{8}$	8 $\frac{1}{2}$	17	21 $\frac{1}{2}$	7 $\frac{1}{2}$	8 $\frac{1}{2}$	$\frac{13}{16}$
4	7 $\frac{1}{2}$	9	19 $\frac{1}{4}$	24 $\frac{1}{4}$	9	9	$\frac{13}{16}$
4 $\frac{1}{2}$	7 $\frac{3}{4}$	9 $\frac{1}{2}$	20	25 $\frac{1}{4}$	9	9 $\frac{1}{4}$	$\frac{15}{16}$
5	8	10	22 $\frac{1}{2}$	28 $\frac{1}{4}$	10	10	$\frac{15}{16}$
6	8 $\frac{1}{2}$	10 $\frac{1}{2}$	24 $\frac{1}{2}$	32	12	11	1
7	8 $\frac{3}{4}$	11	28 $\frac{1}{2}$	37	12	12 $\frac{1}{2}$	1 $\frac{1}{16}$
8	9 $\frac{1}{8}$	11 $\frac{1}{2}$	31	40	14	13 $\frac{1}{2}$	1 $\frac{1}{8}$
10	11 $\frac{3}{8}$	13	37 $\frac{3}{8}$	48 $\frac{5}{8}$	14 $\frac{1}{4}$	14 $\frac{1}{4}$	1 $\frac{3}{16}$
12	12 $\frac{1}{2}$	14	39 $\frac{7}{8}$	52 $\frac{7}{8}$	17	17	1 $\frac{5}{16}$

Size In.	PRICE, EACH				Size In.	PRICE, EACH			
	With Steel Stem Serd.	With Brass Stem Serd.	With Steel Stem Flgd.	With Brass Stem Flgd.		With Steel Stem Serd.	With Brass Stem Serd.	With Steel Stem Flgd.	With Brass Stem Flgd.
2	17.50	19.00	19.50	21.00	5	42.00	45.00	46.00	49.00
2 $\frac{1}{2}$	19.00	20.50	21.00	22.50	6	48.00	52.00	52.00	56.00
3	22.00	23.50	24.50	26.00	7	64.00	69.00	68.00	73.00
3 $\frac{1}{2}$	25.00	27.00	27.50	29.50	8	80.00	86.00	84.00	90.00
4	30.00	32.50	34.00	36.50	10	122.00	131.00	127.00	136.00
4 $\frac{1}{2}$	37.00	40.00	41.00	44.00	12	160.00	172.00	168.00	180.00

Valves will be shipped faced only unless otherwise ordered.  
Valves regularly furnished open to the left.

**ALL IRON GATE VALVES**

All iron gate valves same list as brass mounted.

## IMICO STANDARD BRASS VALVES

### GLOBE AND ANGLE VALVES

#### WITH BRASS DISC

For Steam Working Pressures Up to 125 Pounds

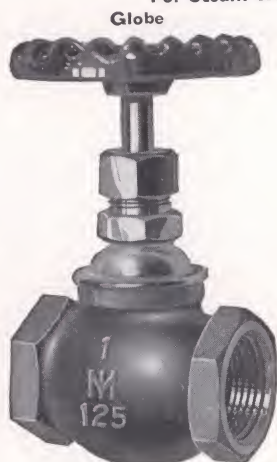


Fig. 8743A



Fig. 8743B

Size.....inches	1/8	1/4	5/8	1/2	3/4	1	1 1/4
Price, Globe or Angle.....each	.72	.72	.77	1.00	1.26	1.80	2.52
Size.....inches	1 1/2	2	2 1/2	3	3 1/2	4	....
Price, Globe or Angle.....each	3.50	5.30	10.00	14.40	26.50	36.00	....

### DOUBLE DISC GATE VALVES

#### TAPER SEATS—NON-RISING STEM

For Steam Working Pressure Up to 125 Pounds



Fig. 8743C

Size.....inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Price.....each	1.45	1.45	1.65	2.05	2.80	3.70	5.00	7.30	13.00	19.00

## IMICO SECTIONAL HEATING BOILERS

### CONSTRUCTION

The Imico Heating Boilers are made of vertical cast iron sections connected to cast iron headers by extra heavy wrought iron nipples, all screw joints being readily accessible and connected outside the fire. The heating engineer will appreciate one point peculiar to the Imico Boiler, namely: That care is taken by means of special machinery to secure perfect alignment—a feature not possessed by other screw connection boilers.

### CIRCULATION

The Imico Heating Boilers are so constructed that the circulation is absolutely perfect; the waterways being vertically inclined and fire surfaces being horizontal, insure at all times good results and quick separation of steam from water. Another feature of construction inducing perfect circulation is the fact that each section has independent positive internal circulation.

### HEATING SURFACE

Each Imico Heating Boiler is provided with a sufficiency of grate surface, together with the proper proportion of prime heating surface to utilize the products of combustion, and for this reason we claim that this boiler is a small coal consumer in proportion to results obtained. This boiler practically possesses all the merits of water tube construction, with better results as to circulation.

### FUEL

The Imico Heating Boilers are adapted for burning anthracite coal, bituminous coal, coke or wood, and as there are no inaccessible surfaces to clog up, any kind of fuel may be used successfully.

### GRATE FIXTURES

The Imico Heating Boiler has a rocking grate, shaken by a lever, which does not require dumping to clear out clinkers, as ashes and clinkers are ground up by the rocking action of the grate. The grates of all except the smaller sizes are shaken by two sets of levers, each set controlling one half of the grate surface. All grate fixtures are made of malleable iron, excepting the grate bars; namely, the handle, shaking bar, lever, toggle and bracket are made of malleable iron and the bars proper of gray iron.

### CLEANLINESS

An important factor in all heating boilers is accessibility of flue surface in order that same may be kept clean. In the Imico Heating Boilers, the last section can be cleaned from the back and all other sections are easily reached through the front cleanout doors.

### SPECIAL NOTICE—RATINGS

In computing the ratings of Imico Heating Boilers, we have adhered to our long established policy of conservative ratings, and the ratings herein shown are so safe that the trade may be assured that in installing the Imico Line, 100 per cent satisfaction may be expected, providing normal conditions obtain regarding exposure, installation, etc.

We do not recommend the use of a pipe coil or cast iron section in the fire pot for hot water supply, but advise the use of a separate water heater.



## IMICO SECTIONAL WATER BOILERS

## 400 SERIES

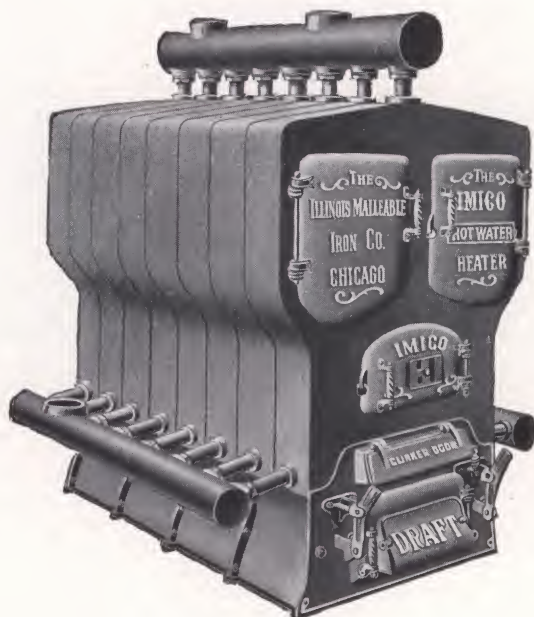


Fig. 8518A

Number	Number of Sections	Length Inches	Base Inches	Grate Inches	Tapped for Flow and Return Inches	Direct Radiation Square Feet	Price Each
395	5	50	33x33	24x27	2—3	1500	310.00
400	6	57	33x40	24x34	2—3	1825	360.00
405	7	63	33x46	24x40	2—4	2150	420.00
410	8	69	33x52	24x46	2—4	2525	475.00
415	9	75	33x58	24x52	2—4	2875	515.00
420	10	82	33x65	24x59	2—4	3250	575.00

Prices include necessary fire tools.

Ratings are gross, and it is understood that all piping, mains and risers shall be figured as radiating surface.

The ratings on Imico Water Boilers are based on the assumption that the mean temperature of the water at the boiler be 180° Fahr.

## IMICO SECTIONAL STEAM BOILERS

## 500 Series

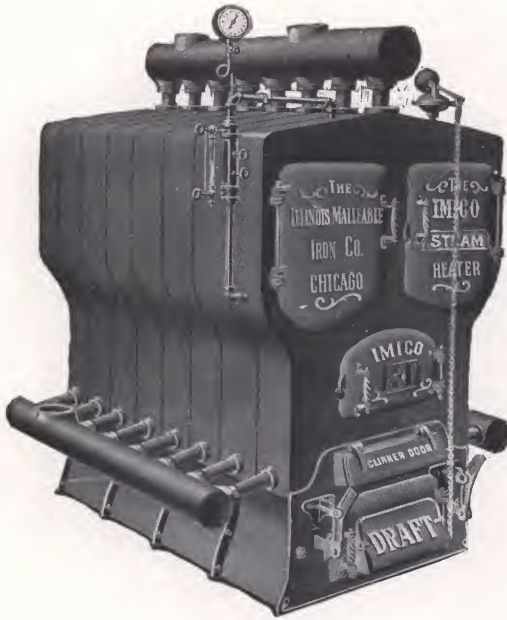


Fig. 8520A

Number	Number of Sections	Length Inches	Base Inches	Grate Inches	Tapped for Flow and Return Inches	Direct Radiation Square Feet	Price Each
495	5	50	33x33	24x27	2—3	900	330.00
500	6	57	33x40	24x34	2—3	1100	385.00
505	7	63	33x46	24x40	2—4	1300	440.00
510	8	69	33x52	24x46	2—4	1525	495.00
515	9	75	33x58	24x52	2—4	1750	545.00
520	10	82	33x65	24x59	2—4	1975	600.00

Prices include necessary trimmings and fire tools.

Ratings are gross, and it is understood that all piping, mains and risers shall be figured as radiating surface.

The ratings on Imico Steam Boilers are based on the assumption that an average pressure of 2 pounds be maintained at the boiler.

## IMICO SECTIONAL WATER BOILERS

## 600 SERIES

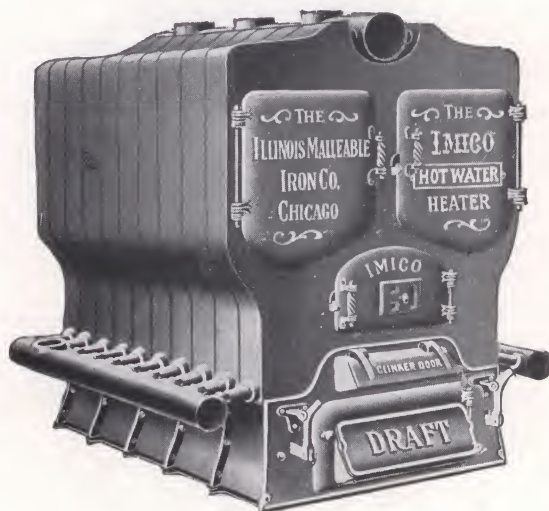


Fig. 8523A

Number	Number of Sections	Base Inches	Grate Inches	Tapped for Flow and Return Inches	Direct Radiation Square Feet	Price Each
600	7	44x45	36x40	2—4	3650	640.00
605	8	44x51	36x46	3—4	4300	700.00
610	9	44x57	36x52	2—5	4950	805.00
615	10	44x64	36x59	2—5	5600	885.00
620	11	44x70	36x65	2—6	6250	985.00
625	12	44x76	36x65	2—6	6900	1075.00
630	13	44x83	36x65	2—6	7550	1195.00
635	14	44x89	36x65	2—6	8200	1310.00

Prices include necessary fire tools.

Ratings are gross, and it is understood that all piping, mains and risers shall be figured as radiating surface.

The ratings on Imico Water Boilers are based on the assumption that the mean temperature of the water at the boiler be 180° Fahr.



## IMICO SECTIONAL STEAM BOILERS

## 700 SERIES



Fig. 8525A

Number	Number of Sections	Base Inches	Grate Inches	Tapped for Flow Inches	Tapped for Return Inches	Direct Radiation Square Feet	Price Each
700	7	44x45	36x40	2—4	2—4	2200	670.00
705	8	44x51	36x46	3—4	4—4	2600	740.00
710	9	44x57	36x52	2—5	4—4	3000	815.00
715	10	44x64	36x59	2—5	4—4	3400	940.00
720	11	44x70	36x65	2—6	4—4	3800	1015.00
725	12	44x76	36x65	2—6	4—4	4200	1105.00
730	13	44x83	36x65	2—6	4—5	4600	1215.00
735	14	44x89	36x65	2—6	4—5	5000	1340.00

Prices include necessary trimmings and fire tools.

Ratings are gross, and it is understood that all piping, mains and risers shall be figured as radiating surface.

The ratings on Imico Steam Boilers are based on the assumption that an average pressure of 2 pounds be maintained at the boiler.

## IMICO SECTIONAL BOILERS

## DIMENSIONS AND MEASUREMENTS OF 400 AND 500 SERIES

Number of Water Boiler.....	395	400	405
“ “ Steam “.....	495	500	505
“ “ Sections.....	5	6	7
Length “ “ only.....inches	31	38	44
“ Including Smoke Box.....	50	57	63
Width of Sections.....	40	40	40
“ Center to Center of Return Headers.....	46½	46½	46½
Height to Flow Pipe Openings.....	69	69	69
“ “ Top of Sections.....	58	58	58
“ “ Return Pipe Openings.....	17½	17½	17½
“ of Base.....	14	14	14
“ to Smoke Pipe Opening.....	43	43	43
“ of Water Line.....	51	51	51
Diameter of Smoke Pipe.....	8	8	10
Dimensions of Base.....	33x33	33x40	33x46
“ “ Grate.....	24x27	24x34	24x40
“ “ Fire Door Opening.....	9x14½	9x14½	9x14½
Front of Boiler to Center of First Flow Pipe Opening.....	8	14½	8
Center to Center of Flow Pipe Openings.....	12¾	12¾	25½
Front of Boiler to Center of Return Pipe Openings.....	17½	24¾	30
Flow Pipe Openings.....	2—3	2—3	2—4
Return Pipe Openings.....	2—3	2—3	2—4
Number of Water Boiler.....	410	415	420
“ “ Steam “.....	510	515	520
“ “ Sections.....	8	9	10
Length “ “ only.....inches	50	57	63
“ Including Smoke Box.....	69	75	82
Width of Sections.....	40	40	40
“ Center to Center of Return Headers.....	46½	46½	46½
Height to Flow Pipe Openings.....	69	69	69
“ “ Top of Sections.....	58	58	58
“ “ Return Pipe Openings.....	17½	17½	17½
“ of Base.....	14	14	14
“ to Smoke Pipe Opening.....	43	43	43
“ of Water Line.....	51	51	51
Diameter of Smoke Pipe.....	10	12	12
Dimensions of Base.....	33x52	33x58	33x65
“ “ Grate.....	24x46	24x52	24x59
“ “ Fire Door Opening.....	9x14½	9x14½	9x14½
Front of Boiler to Center of First Flow Pipe Opening.....	14½	8	14½
Center to Center of Flow Pipe Openings.....	25½	38½	38½
Front of Boiler to Center of Return Pipe Openings.....	37	43¾	49½
Flow Pipe Openings.....	2—4	2—4	2—4
Return Pipe Openings.....	2—4	2—4	2—4

## IMICO SECTIONAL BOILERS

## DIMENSIONS AND MEASUREMENTS OF 600 AND 700 SERIES

Number of Water Boiler.....	600	605	610	615
“ “ Steam “.....	700	705	710	715
“ “ Sections.....	7	8	9	10
Length of Sections only.....inches	44 $\frac{1}{8}$	50 $\frac{1}{4}$	56 $\frac{5}{8}$	63
“ Including Smoke Box.....	65 $\frac{1}{8}$	71 $\frac{1}{4}$	77 $\frac{5}{8}$	84
Width of Sections.....	53	53	53	53
“ Center to Center of Return Headers “	60	60	60	60
Height to Flow Pipe Openings.....	73	73	73	73
“ “ Top of Sections.....	73	73	73	73
“ “ Return Pipe Openings.....	17 $\frac{1}{4}$	17 $\frac{1}{4}$	17 $\frac{1}{4}$	17 $\frac{1}{4}$
“ of Base.....	14	14	14	14
“ to Smoke Pipe Opening.....	49	49	49	49
“ of Water Line.....	61 $\frac{1}{2}$	61 $\frac{1}{2}$	61 $\frac{1}{2}$	61 $\frac{1}{2}$
Dimensions of Smoke Pipe Opening.....	14	14	14	16
“ “ Base.....	45x44	51x44	57x44	64x44
“ “ Grate.....	40x36	46x36	52x36	59x36
“ “ Fire Door Opening.....	19x11	19x11	19x11	19x11
Front of Boiler to Center of First Flow Pipe Opening.....	14 $\frac{1}{2}$	15 $\frac{1}{2}$	15 $\frac{1}{2}$	20 $\frac{3}{4}$
Center to Center of Flow Pipes.....	13 $\frac{1}{4}$	12 $\frac{1}{2}$	25	25 $\frac{1}{2}$
Front of Boiler to Center of Return Pipe Openings.....	8	14 $\frac{1}{2}$	8	14 $\frac{1}{2}$
Center to Center of Return Pipe Openings.....	.....	25 $\frac{1}{2}$	32	38
Flow Pipe Openings.....	2—4	3—4	2—5	2—5
Return Pipe Openings.....	2—4	4—4	4—4	4—4
Number of Water Boiler.....	620	625	630	635
“ “ Steam “.....	720	725	730	735
“ “ Sections.....	11	12	13	14
Length “ “ only.....inches	69 $\frac{3}{8}$	75 $\frac{5}{8}$	82	88 $\frac{3}{8}$
“ Including Smoke Box.....	90 $\frac{3}{8}$	96 $\frac{5}{8}$	103	109 $\frac{3}{8}$
Width of Sections.....	53	53	53	53
“ Center to Center of Return Headers “	60	60	60	60
Height to Flow Pipe Openings.....	73	73	73	73
“ “ Top of Sections.....	73	73	73	73
“ “ Return Pipe Openings.....	17 $\frac{1}{4}$	17 $\frac{1}{4}$	18 $\frac{1}{2}$	18 $\frac{1}{2}$
“ of Base.....	14	14	14	14
“ to Smoke Pipe Opening.....	49	49	49	49
“ of Water Line.....	61 $\frac{1}{2}$	61 $\frac{1}{2}$	61 $\frac{1}{2}$	61 $\frac{1}{2}$
Dimensions of Smoke Pipe Opening.....	16	16	20	20
“ “ Base.....	70x44	76 $\frac{1}{2}$ x44	83x44	89x44
“ “ Grate.....	65x36	65x36	65x36	65x36
“ “ Fire Door Opening.....	19x11	19x11	19x11	19x11
Front of Boiler to Center of First Flow Pipe Opening.....	20 $\frac{3}{4}$	21 $\frac{1}{4}$	21 $\frac{1}{4}$	21 $\frac{1}{4}$
Center to Center of Flow Pipes.....	31 $\frac{1}{2}$	31 $\frac{1}{2}$	37 $\frac{3}{4}$	44
Front of Boiler to Center of Return Pipe Openings.....	17 $\frac{3}{4}$	17 $\frac{3}{4}$	17 $\frac{3}{4}$	17 $\frac{3}{4}$
Center to Center of Return Pipe Openings.....	38	44 $\frac{1}{4}$	50 $\frac{1}{2}$	57
Flow Pipe Openings.....	2—6	2—6	2—6	2—6
Return Pipe Openings.....	4—4	4—4	4—5	4—5



## IMICO SECTIONAL BOILERS

Interior View of 400 and 500 Series

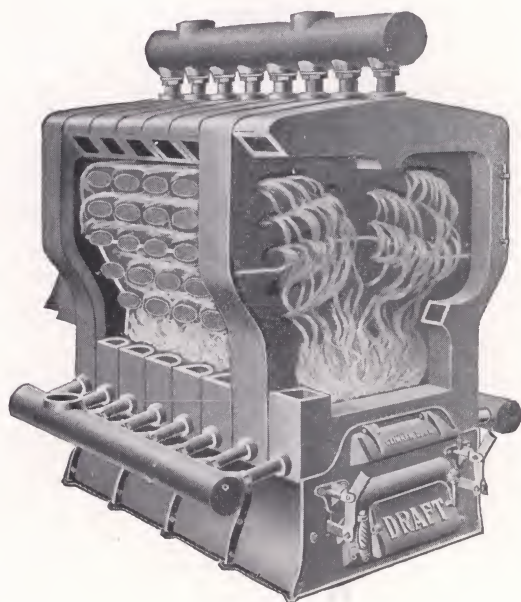


Fig. 8534A

Sections of 400 and 500 Series

Intermediate  
Section



Fig. 8534B

Next to Last  
Section

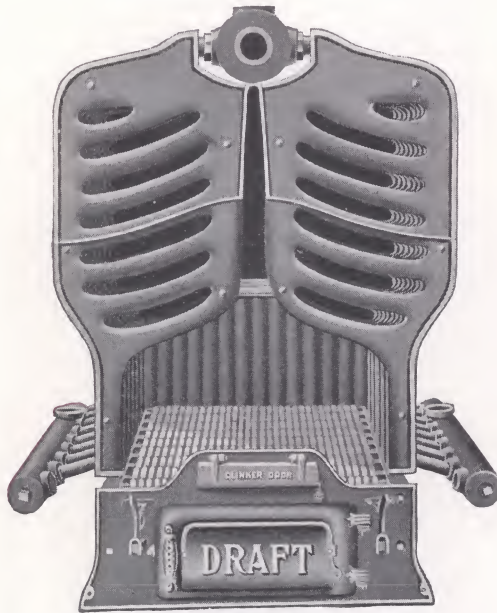
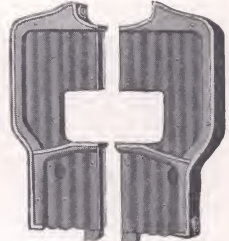


Fig. 8534C

Back Section



Fig. 8534D

**IMICO SECTIONAL BOILERS****Front View of Sections, 600 and 700 Series****Fig. 8530A****Sections of 600 and 700 Series****Inside View  
Front Section****Fig. 8530B****Intermediate  
Section****Fig. 8530C****Next to Last  
Section****Fig. 8530D****Back Section****Fig. 8530E**

## IMICO SECTIONAL STEAM BOILERS

View of Rear of Back Section, Showing Drain  
and Equalizer Pipes

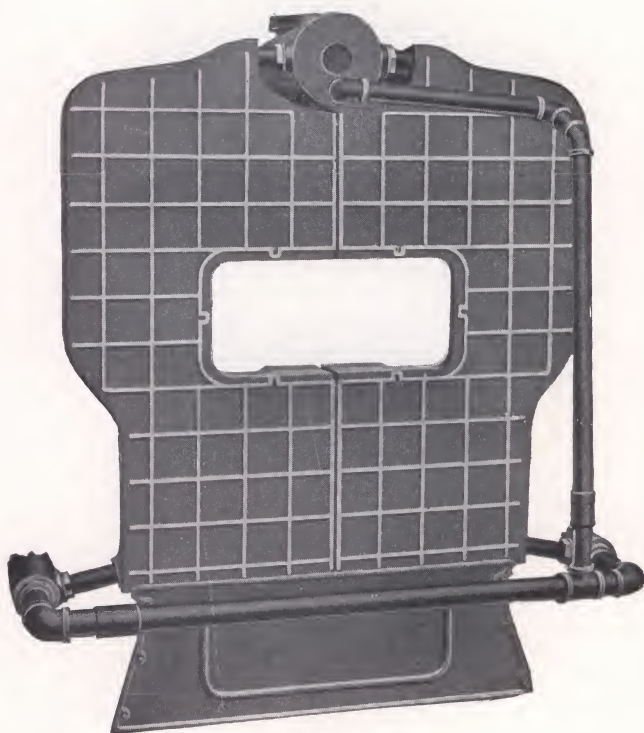


Fig. 8536A



**IMICO SECTIONAL BOILERS****Grate Closed, in Actual Use****Fig. 8531A****Grate Open in Act of Shaking****Fig. 8531B****Smoke Pipe Outlet and Check Damper****Fig. 8531C**

## IMICO SECTIONAL BOILERS

### REPAIR PARTS

#### 400 AND 500 SERIES

Description	Price Each
Front Section.....	75.00
Intermediate Section.....	81.00
Back Section.....	95.00
Fire Door.....	2.50
“ “ Lining.....	1.50
Flue “.....	4.75
“ “ Lining.....	4.35
Clinker Door.....	1.10
Fire Door Slide.....	.45
Ash Pit Door only.....	3.65
Draft Door.....	2.60
Ash Pit Door Complete.....	6.25
Front Plate for Ash Pit.....	8.75
Rear “ “ “ “ Complete.....	11.00
Door for Rear Ash Pit.....	3.65
Side Plate for “ “ 24-inch.....	6.50
“ “ “ “ “ 12 “.....	3.30
“ “ “ “ “ 6 “.....	2.15
Grate Bars.....	6.50
Smoke Box Complete.....	10.00
Shaker Bar.....	1.00

#### 600 AND 700 SERIES

Description	Price Each
Half Front Section.....	66.00
“ Intermediate Section.....	65.00
“ Bridge Section.....	80.00
“ Back Section.....	75.00
Fire Door Frame.....	3.50
“ “.....	5.15
“ “ Lining.....	3.25
Flue “.....	10.50
“ “ Lining.....	7.00
Clinker Door.....	1.20
Fire Door Slide.....	.40
Ash Pit Door only.....	4.50
Draft Door.....	2.25
Ash Pit Door Complete.....	6.75
Front Plate for Ash Pit.....	9.75
Rear “ “ “ “ Complete.....	12.75
Door for Rear Ash Pit.....	4.25
Side Plates for “ “ 24-inch.....	6.50
“ “ “ “ “ 12 “.....	3.30
“ “ “ “ “ 6 “.....	2.15
Grate Bars.....	10.00
Smoke Outlet Complete.....	22.00
Shaker Bar.....	1.50

### HEADERS FOR IMICO SECTIONAL BOILERS

Number of Water Boiler.....	395	400	405	410	415	420	600
“ “ Steam “.....	495	500	505	510	515	520	700
Price, Flow Header.....each	17.00	19.00	22.00	26.00	28.00	30.50	39.00
“ Return “.....“	9.50	11.50	13.50	16.50	18.50	21.00	14.50
Number of Water Boiler.....	605	610	615	620	625	630	635
“ “ Steam “.....	705	710	715	720	725	730	735
Price, Flow Header.....each	41.00	42.50	51.00	58.00	60.00	66.00	72.00
“ Return “.....“	17.00	18.50	21.00	25.00	29.00	33.00	37.00

Extra heavy nipples for above: 1½-inch, 60 cents; 2-inch, 70 cents.

## IMICO ILLINOIS WATER AND STEAM BOILERS

### FOR HARD OR SOFT COAL

The Imico Illinois is an improvement on the original Imico Diamond—retaining the corrugated sections and fire pot, but having larger flues.

The sections are diamond corrugated, exposing a much larger amount of surface to action of fire than is possible with plain sections; these sections are connected one to another with large slip nipples.

The fire pot in the Imico Illinois is large and deep, with diamond corrugations on sides and with extended crown sheet (note details on illustration)—intended to absorb all the heat possible; the diamond corrugations in fire pot admit a free circulation of air against water space, thus maintaining a bright, active fire with no dead edges as in ordinary fire pots.

The draft door is located on side of boiler, so that chains from damper regulator do not interfere with ash pit door.

Ash pit is large and very deep.

The Imico Illinois Boiler is fitted with a rocking grate, all working parts, except the grate bars, being made of malleable iron.



## IMICO ILLINOIS WATER BOILERS



Fig. 8540A

Number	Diameter of Base Inches	Diameter of Boiler Inches	Diameter of Fire Pot Inches	Diameter of Grate Inches	Diameter of Smoke Pipe Inches	Height Inches	Tapped for Flow and Return Inches	Direct Radiation Square Feet	Price Each
481	29	22 $\frac{3}{4}$	18 $\frac{1}{2}$	19	8	50 $\frac{1}{2}$	2-2 $\frac{1}{2}$	790	163.00
581	29	22 $\frac{3}{4}$	18 $\frac{1}{2}$	19	8	56	2-2 $\frac{1}{2}$	825	178.50
402	31	24 $\frac{3}{4}$	20 $\frac{1}{2}$	21	8	52 $\frac{1}{2}$	2-3	965	188.00
502	31	24 $\frac{3}{4}$	20 $\frac{1}{2}$	21	8	58	2-3	1090	200.00
422	33	26 $\frac{3}{4}$	22 $\frac{1}{2}$	23	9	56	2-3 $\frac{1}{2}$	1150	226.00
522	33	26 $\frac{3}{4}$	22 $\frac{1}{2}$	23	9	62	2-3 $\frac{1}{2}$	1275	245.50
442	36	28 $\frac{3}{4}$	24 $\frac{1}{2}$	25	10	58	2-4	1425	272.50
542	36	28 $\frac{3}{4}$	24 $\frac{1}{2}$	25	10	64	2-4	1560	290.00

Prices include necessary fire tools.

Ratings are gross, and it is understood that all piping, mains and risers shall be figured as radiating surface.

The ratings on the Imico Water Boilers are based on the assumption that the mean temperature of the water at the boiler be 180° Fahr.

*Blue #402 C 402*

## IMICO ILLINOIS STEAM BOILERS



Fig. 8543A

Number	Diameter of Base Inches	Diameter of Boiler Inches	Diameter of Fire Pot Inches	Diameter of Grate Inches	Diameter of Smoke Pipe Inches	Height Inches	Tapped for Flow and Return Inches	Direct Radiation Square Feet	Price Each
2481	29	22 $\frac{3}{4}$	18 $\frac{1}{2}$	19	8	56 $\frac{1}{2}$	2-2 $\frac{1}{2}$	480	195.00
2581	29	22 $\frac{3}{4}$	18 $\frac{1}{2}$	19	8	61 $\frac{1}{2}$	2-2 $\frac{1}{2}$	535	206.00
2402	31	24 $\frac{3}{4}$	20 $\frac{1}{2}$	21	8	58	2-3	585	227.00
2502	31	24 $\frac{3}{4}$	20 $\frac{1}{2}$	21	8	63 $\frac{1}{2}$	2-3	660	252.00
2422	33	26 $\frac{3}{4}$	22 $\frac{1}{2}$	23	9	61 $\frac{1}{2}$	2-3 $\frac{1}{2}$	700	260.00
2522	33	26 $\frac{3}{4}$	22 $\frac{1}{2}$	23	9	67 $\frac{1}{2}$	2-3 $\frac{1}{2}$	775	283.00
2442	36	28 $\frac{3}{4}$	24 $\frac{1}{2}$	25	10	63 $\frac{1}{2}$	2-4	865	305.00
2542	36	28 $\frac{3}{4}$	24 $\frac{1}{2}$	25	10	69 $\frac{1}{2}$	2-4	950	325.00

Prices include necessary trimming and fire tools.

Ratings are gross, and it is understood that all piping, mains and risers shall be figured as radiating surface.

The ratings on Imico Steam Boilers are based on the assumption that an average pressure of 2 pounds be maintained at the boiler.

## IMICO ILLINOIS BOILERS

Sectional View of Imico Illinois Boiler, Showing Diamond Corrugations

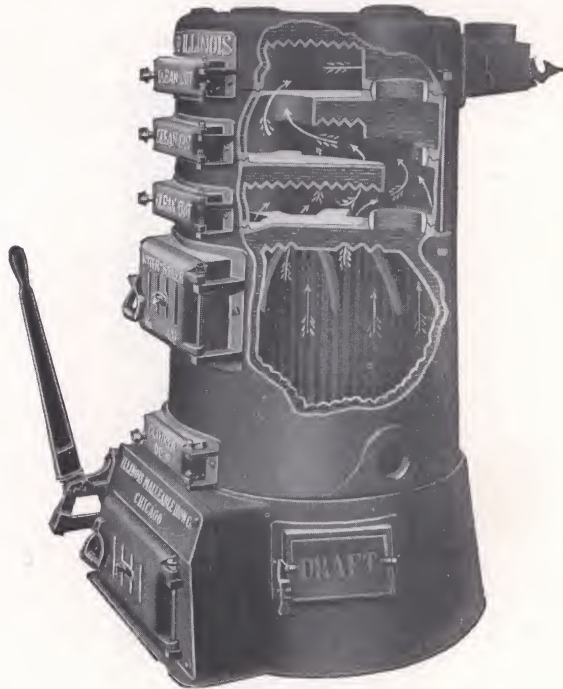


Fig. 8544A

Sectional View of Section of Imico Illinois Boiler, Showing Diamond Corrugations and Water Circulation

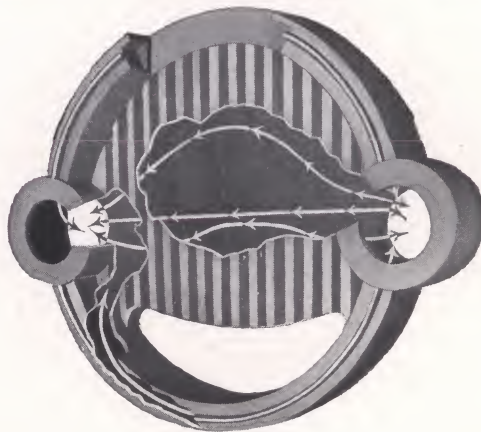


Fig. 8544B



## IMICO ILLINOIS BOILERS

Inside View of Fire Pot of Imico Illinois Boilers  
Showing Diamond Corrugations Along Sides of Fire Pot and  
Extended Construction of Crown Sheet



Fig. 8545A

View of Grate of Imico Illinois Boilers



Fig. 8545B

## IMICO ILLINOIS ROUND BOILERS

## REPAIR PARTS

Trade Number of Boiler	Water . . . . .	481-581	402-502	422-522	442-542
	Steam . . . . .	2481-2581	2402-2502	2422-2522	2442-2542
Nominal Diameter of Grate . . . . .	inches	19	21	23	25
Price, No. 1, Base . . . . .	each	22.00	26.50	30.00	45.00
" " 2, Shaker Bracket . . . . .	"	.70	.70	.70	.70
" " 3, Rear Grate Bar . . . . .	"	2.75	3.00	3.25	4.00
" " 4, Front " " . . . . .	"	2.75	3.00	3.25	4.00
" " 5, Center " " . . . . .	"	3.75	4.00	4.50	5.25
" " 6, Ash Pit Door Frame . . . . .	"	4.00	4.00	4.75	5.75
" " 7, Ash Pit Door . . . . .	"	1.50	2.00	2.50	2.70
" " 8, Clinker Door . . . . .	"	.60	.60	.70	.70
" " 9, Draft Door Frame . . . . .	"	1.00	1.00	1.40	1.40
" " 10, " " . . . . .	"	.60	.65	.70	.70
" " 11, Shaker Hole Cover . . . . .	"	.15	.15	.15	.15
" " 12, Fire Pot Section . . . . .	"	85.00	96.00	107.00	122.00
" " 13, Fire Door . . . . .	"	1.40	1.40	1.60	1.75
" " 14, Ash Door Slide . . . . .	"	.40	.40	.40	.40
" " 14A, Fire Door Slide . . . . .	"	.40	.40	.40	.40
" " 15, " " Lining . . . . .	"	.70	.70	.80	.90
" " 16, " " Frame . . . . .	"	2.00	2.25	3.00	3.50
" " 17, Ratchet Catch . . . . .	"	.30	.30	.30	.30
" " 18, Intermediate Section . . . . .	"	26.00	32.00	38.00	42.00
" " 19, " " . . . . .	"	26.00	32.00	38.00	42.00
" " 20, Intermediate Cleanout Door Frame . . . . .	"	.70	.80	.80	.90
" " 21, " " " " . . . . .	"	.70	.70	.80	.80
" " 22, Top Cleanout Door Frame . . . . .	"	.90	1.00	1.00	1.00
" " 23, Top Section Water . . . . .	"	32.00	35.50	42.00	50.00
" " 24, " " Steam . . . . .	"	48.00	66.00	70.00	80.00
" " 25, Smoke Outlet . . . . .	"	3.25	3.75	5.00	5.00
" " 26, Pipe Damper Stem . . . . .	"	.40	.40	.40	.40
" " 27, Check Damper . . . . .	"	.50	.60	.60	.60
" " 28, Pipe Damper . . . . .	"	.50	.60	.60	.60
" " 29, Shaker Lever . . . . .	"	1.10	1.10	1.10	1.10
" " 30, Coil Opening Clamp . . . . .	"	.30	.30	.30	.30
" " 31, " " Cover . . . . .	"	.30	.30	.30	.30
" " 32, Grate Connecting Bar . . . . .	"	.60	.70	.70	.80
" " 33, " Shaker Toggle . . . . .	"	.75	.75	.75	.75
" " 34, Shaker Bar . . . . .	"	.70	.70	.80	.80
" " 35, Clinker Door Frame . . . . .	"	.75	.85	1.00	1.00
" " 36, " " Liner . . . . .	"	.60	.80	.80	.80
" " 37, Slip Connection Nipples . . . . .	"	.90	.90	.90	.90

## IMICO GARBAGE BURNER AND WATER HEATERS

No. 72, Front View



Fig. 8551A

No. 71, Internal View

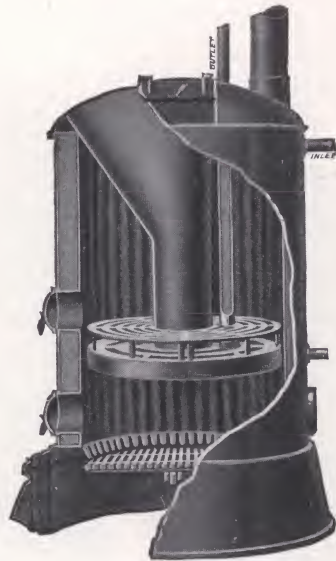


Fig. 8551B

The No. 72 size is suitable for residences and small apartment houses, say not exceeding six suites. The No. 71 has been successfully used in buildings containing twelve apartments.

Number.....	71	72
Height Over All.....inches	46	46
“ of Water Cylinder.....“	28	28
Diameter of Cylinder.....“	31½	24
“ “ Base.....“	35	28½
“ “ Grate.....“	27	17
Smoke Outlet.....“	10x5	7x4¾
Iron Pipe Connections.....“	2½	2
Heating Capacity, per Hour.....gallons	750	325
Price.....each	230.00	165.00



## ILLINOIS HOT WATER HEATERS

## MAGAZINE FEED—FOR HARD COAL

Front View, No. 6-7

Front View, No. 5



Fig. 8548A



Fig. 8548B

Sectional View, No. 15

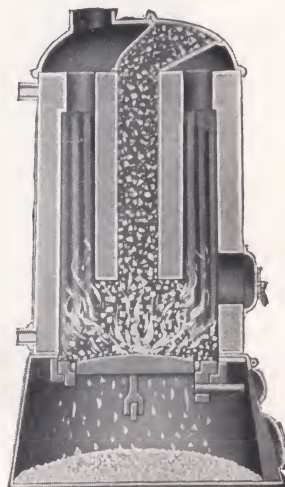


Fig. 8543C

No.	Height Inches	Outside Diam. of Boiler In.	Inside Diam. of Magazine In.	Diam. of Base In.	Diam. of Grate In.	Diam. Smoke Pipe In.	Iron Pipe Cons. In.	Heating Capacity per Hour Gallons	Price Each
5	37	13	5	18½	10	5	1¼	100	37.00
6	43	15¾	6	21	12	6	1½	180	65.00
7	49	18½	7½	23½	15	6	2	300	89.00
15	45½	19½	6	24	16	6	1½	400	139.00

Capacity named above is based on the assumption that sufficient storage tank capacity is provided for heater.

NOTE.—The magazines in Nos. 5, 6 and 7 are plain, without water chamber—the No. 15 being the only one made with water chamber.

## BOILERS AND HEATERS

### No. 112 Aetna Hot Water Boiler For Hard and Soft Coal



**Fig. 8550A**

**Imico Laundry Water Heaters**  
**No. 152, Two Holes**  
**No. 154, Four Holes**



**Fig. 8550B**

## AETNA HOT WATER BOILERS WITH LENGTHENED WATER CYLINDER

WITH LENGTHENED WATER CYLINDER			
Number.....	112	116	120
Height.....inches	35	38½	40
Diameter of Heater.....	16	19	24
“ “ Grate.....“	12	16	20
Smoke Pipe.....“	5	6	6
Iron Pipe Connections.....	1¼	1½	2
Capacity, Direct Radiation.....square feet	115	200	300
Heating Capacity, per Hour.....gallons	150	260	400
Price.....each	45.00	72.00	100.00

Capacities named above are based on assumption that sufficient storage tank capacity is provided for heater.

## IMICO LAUNDRY WATER HEATERS

The Imico Hot Water Heaters are durably constructed with heavy draw center shaking grates. The large exposure of heating surface to the direct action of the fire makes the Imico a very rapid heater and is extremely economical in the consumption of fuel.

Number.....	152	154
Height.....inches	23½	23½
Size of Top.....	13½x21½	19¾x21½
Outside Diameter of Fire Pot Section.....	14	14
Inside " " " " ".....	11	11
Height of Fire Pot Section.....	7	7
Diameter of Grate.....	10	10
Smoke Pipe.....	6	6
Iron Pipe Connections.....	1	1
Heating Capacity, per Hour.....gallons	30-100	30-100
Price.....each	19.00	22.50

# M HYDRANTS AND STREET WASHERS

## ANTI-FREEZING

COMPRESSION  
HYDRANT



Fig. 5265A

SELF-CLOSING  
HYDRANT



Fig. 5265B

STREET  
WASHER



Fig. 5265C

## COMPRESSION HYDRANTS

To set in Ground .....	feet	2	3	4	5	6
Price, $\frac{3}{4}$ -inch .....	each	9.00	10.00	11.00	12.00	13.00
" 1 " .....	"	11.50	12.50	13.50	14.50	15.50

## SELF-CLOSING HYDRANTS

To set in Ground .....	feet	2	3	4	5	6
Price, $\frac{3}{4}$ -inch .....	each	11.00	12.00	13.00	14.00	15.00

## STREET WASHERS

To set in Ground .....	feet	2	3	4	5	6
Price, $\frac{3}{4}$ -inch .....	each	8.00	8.50	9.50	10.50	11.50
" 1 " .....	"	9.00	10.00	11.00	12.00	13.00*

In ordering, be careful to give length and whether wanted for lead or iron pipe.





## MACHINE BOLTS

## SQUARE HEADS, SQUARE NUTS AND FINISHED POINTS



Fig. 33550A

## PRICE, PER HUNDRED—MANUFACTURERS' STANDARD LIST

Revised Sept. 1, 1923

Length Inches	DIAMETER INCHES										
	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{5}{8}$ and $\frac{3}{4}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{4}$
$1\frac{1}{2}$	1.70	2.00	2.40	3.00	3.70	5.50	7.70	10.50	15.10	22.50	30.00
2	1.80	2.15	2.60	3.25	4.00	5.90	8.25	11.20	16.00	23.70	31.50
$2\frac{1}{2}$	1.90	2.30	2.80	3.50	4.30	6.30	8.80	11.90	16.90	24.90	33.00
3	2.00	2.45	3.00	3.75	4.60	6.70	9.35	12.60	17.80	26.10	34.50
$3\frac{1}{2}$	2.10	2.60	3.20	4.00	4.90	7.10	9.90	13.30	18.70	27.30	36.00
4	2.20	2.75	3.40	4.25	5.20	7.50	10.45	14.00	19.60	28.50	37.50
$4\frac{1}{2}$	2.30	2.90	3.60	4.50	5.50	7.90	11.00	14.70	20.50	29.70	39.00
5	2.40	3.05	3.80	4.75	5.80	8.30	11.55	15.40	21.40	30.90	40.50
$5\frac{1}{2}$	2.50	3.20	4.00	5.00	6.10	8.70	12.10	16.10	22.30	32.10	42.00
6	2.60	3.35	4.20	5.25	6.40	9.10	12.65	16.80	23.20	33.30	43.50
$6\frac{1}{2}$	3.70	4.50	5.40	6.50	7.70	9.50	13.20	17.50	24.10	34.50	45.00
7	3.80	4.65	5.60	6.75	8.00	9.90	13.75	18.20	25.00	35.70	46.50
$7\frac{1}{2}$	3.90	4.80	5.80	7.00	8.30	10.30	14.30	18.90	25.90	36.90	48.00
8	4.00	4.95	6.00	7.25	8.60	10.70	14.85	19.60	26.80	38.10	49.50
9	4.20	5.25	6.40	7.75	9.20	11.50	15.95	21.00	28.60	40.50	52.50
10	4.40	5.55	6.80	8.25	9.80	12.30	17.05	22.40	30.40	42.90	55.50
11	4.60	5.85	7.20	8.75	10.40	13.10	18.15	23.80	32.20	45.30	58.50
12	4.80	6.15	7.60	9.25	11.00	13.90	19.25	25.20	34.00	47.70	61.50
13	.....	.....	8.00	9.75	11.60	14.70	20.35	26.60	35.80	50.10	64.50
14	.....	.....	8.40	10.25	12.20	15.50	21.45	28.00	37.60	52.50	67.50
15	.....	.....	8.80	10.75	12.80	16.30	22.55	29.40	39.40	54.90	70.50
16	.....	.....	9.20	11.25	13.40	17.10	23.65	30.80	41.20	57.30	73.50
17	.....	.....	9.60	11.75	14.00	17.90	24.75	32.20	43.00	59.70	76.50
18	.....	.....	10.00	12.25	14.60	18.70	25.85	33.60	44.80	62.10	79.50
19	.....	.....	10.40	12.75	15.20	19.50	26.95	35.00	46.60	64.50	82.50
20	.....	.....	10.80	13.25	15.80	20.30	28.05	36.40	48.40	66.90	85.50
21	.....	.....	.....	.....	16.40	21.10	29.15	37.80	50.20	69.30	88.50
22	.....	.....	.....	.....	17.00	21.90	30.25	39.20	52.00	71.70	91.50
23	.....	.....	.....	.....	17.60	22.70	31.35	40.60	53.80	74.10	94.50
24	.....	.....	.....	.....	18.20	23.50	32.45	42.00	55.60	76.50	97.50
25	.....	.....	.....	.....	18.80	24.30	33.55	43.40	57.40	78.90	100.50
26	.....	.....	.....	.....	.....	.....	34.65	44.80	59.20	81.30	103.50
27	.....	.....	.....	.....	.....	.....	35.75	46.20	61.00	83.70	106.50
28	.....	.....	.....	.....	.....	.....	36.85	47.60	62.80	86.10	109.50
29	.....	.....	.....	.....	.....	.....	37.95	49.00	64.60	88.50	112.50
30	.....	.....	.....	.....	.....	.....	39.05	50.40	66.40	90.90	115.50

The following extras are to be understood as a part of this list:

Bolts with hexagon heads or hexagon nuts, 10 per cent extra. If both hexagon heads and hexagon nuts, 20 per cent extra. Joint bolts with oblong nuts, 10 per cent extra. Bolts with tee heads, askew heads and eccentric heads, 20 per cent extra. Key bolts, 20 per cent extra. Bolts with cotter holes, 25 per cent extra.

Machine bolts, when fitted with U. S. standard square nuts, add 5 per cent.

Machine bolts, when fitted with U. S. standard hexagon nuts, add 15 per cent.

## STANDARD SCREWED FITTINGS

## GENERAL DIMENSIONS

Elbow

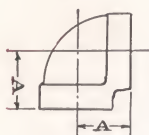


Fig. 8745A

45° Elbow

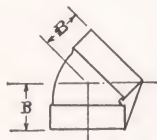


Fig. 8745B

Tee

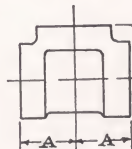


Fig. 8745C

Cross

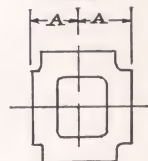


Fig. 8745D

## CAST IRON

Size Inches	DIMENSIONS, INCHES		Size Inches	DIMENSIONS, INCHES	
	A	B		A	B
$\frac{1}{4}$	$\frac{13}{16}$	$\frac{3}{4}$	$3\frac{1}{2}$	$3\frac{5}{16}$	$2\frac{3}{8}$
$\frac{3}{8}$	$\frac{15}{16}$	$\frac{13}{16}$	4	$3\frac{3}{4}$	$2\frac{5}{8}$
$\frac{1}{2}$	$1\frac{1}{8}$	$\frac{7}{8}$	$4\frac{1}{2}$	$4\frac{1}{16}$	$2\frac{13}{16}$
$\frac{3}{4}$	$1\frac{5}{16}$	1	5	$4\frac{3}{8}$	3
1	$1\frac{1}{2}$	$1\frac{1}{8}$	6	5	$3\frac{1}{2}$
$1\frac{1}{4}$	$1\frac{3}{4}$	$1\frac{1}{4}$	7	$5\frac{13}{16}$	0
$1\frac{1}{2}$	$1\frac{7}{8}$	$1\frac{7}{16}$	8	$6\frac{1}{2}$	0
2	$2\frac{3}{16}$	$1\frac{11}{16}$	10	$7\frac{7}{8}$	0
$2\frac{1}{2}$	$2\frac{9}{16}$	$1\frac{15}{16}$	12	$9\frac{1}{4}$	0
3	$3\frac{1}{8}$	$2\frac{3}{16}$	...	...	...

## MALLEABLE IRON

Size Inches	DIMENSIONS, INCHES		Size Inches	DIMENSIONS, INCHES	
	A	B		A	B
$\frac{1}{8}$	$\frac{11}{16}$	...	3	$3\frac{1}{8}$	$2\frac{3}{16}$
$\frac{1}{4}$	$\frac{13}{16}$	$\frac{3}{4}$	$3\frac{1}{2}$	$3\frac{7}{16}$	$2\frac{3}{8}$
$\frac{3}{8}$	$\frac{15}{16}$	$\frac{13}{16}$	4	$3\frac{3}{4}$	$2\frac{5}{8}$
$\frac{1}{2}$	$1\frac{1}{8}$	$\frac{7}{8}$	$4\frac{1}{2}$	$4\frac{1}{16}$	$2\frac{13}{16}$
$\frac{3}{4}$	$1\frac{5}{16}$	1	5	$4\frac{1}{2}$	3
1	$1\frac{1}{2}$	$1\frac{1}{8}$	6	$5\frac{1}{8}$	$3\frac{1}{2}$
$1\frac{1}{4}$	$1\frac{3}{4}$	$1\frac{1}{4}$	7	0	0
$1\frac{1}{2}$	$1\frac{7}{8}$	$1\frac{7}{16}$	8	0	0
2	$2\frac{1}{4}$	$1\frac{11}{16}$	10	0	0
$2\frac{1}{2}$	$2\frac{9}{16}$	$1\frac{15}{16}$	12	0	0

The above dimensions are subject to a slight variation and change without notice.

## LENGTH OF THREAD ON PIPE

That is Screwed into Valves or Fittings to Make a Tight Joint

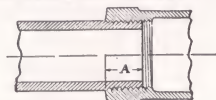


Fig. 8745E

Size Inches	Dimensions Inches, A	Size Inches	Dimensions Inches, A	Size Inches	Dimensions Inches, A
$\frac{1}{8}$	$\frac{1}{4}$	$1\frac{1}{2}$	$\frac{5}{8}$	5	$1\frac{3}{16}$
$\frac{1}{4}$	$\frac{3}{8}$	2	$\frac{11}{16}$	6	$1\frac{1}{4}$
$\frac{3}{8}$	$\frac{3}{8}$	$2\frac{1}{2}$	$\frac{15}{16}$	7	$1\frac{1}{4}$
$\frac{1}{2}$	$\frac{1}{2}$	3	1	8	$1\frac{5}{16}$
$\frac{3}{4}$	$\frac{1}{2}$	$3\frac{1}{2}$	$1\frac{1}{16}$	9	$1\frac{3}{8}$
1	$\frac{9}{16}$	4	$1\frac{1}{16}$	10	$1\frac{1}{2}$
$1\frac{1}{4}$	$\frac{5}{8}$	$4\frac{1}{2}$	$1\frac{1}{8}$	12	$1\frac{5}{8}$

Dimensions given do not allow for variation in tapping and threading.



## STANDARD STEAM, GAS AND WATER PIPE

## BLACK AND GALVANIZED



Fig. 6953A

As Adopted January 1, 1913

All Weights and Dimensions are Nominal

Size Inches	Price per Foot	DIAMETER INCHES		Thickness Inches	WEIGHT, PER FOOT POUNDS		Number of Threads per Inch
		External	Internal		Plain Ends	Threaded and Coupled	
$\frac{1}{8}$	.05 $\frac{1}{2}$	.405	.269	.068	.244	.245	27
$\frac{1}{4}$	.06	.540	.364	.088	.424	.425	18
$\frac{3}{8}$	.06	.675	.493	.091	.567	.568	18
$\frac{1}{2}$	.08 $\frac{1}{2}$	.840	.622	.109	.850	.852	14
$\frac{3}{4}$	.11 $\frac{1}{2}$	1.050	.824	.113	1.130	1.134	14
1	.17	1.315	1.049	.133	1.678	1.684	11 $\frac{1}{2}$
1 $\frac{1}{4}$	.23	1.660	1.380	.140	2.272	2.281	11 $\frac{1}{2}$
1 $\frac{1}{2}$	.27 $\frac{1}{2}$	1.900	1.610	.145	2.717	2.731	11 $\frac{1}{2}$
2	.37	2.375	2.067	.154	3.652	3.678	11 $\frac{1}{2}$
2 $\frac{1}{2}$	.58 $\frac{1}{2}$	2.875	2.469	.203	5.793	5.819	8
3	.76 $\frac{1}{2}$	3.500	3.068	.216	7.575	7.616	8
3 $\frac{1}{2}$	.92	4.	3.548	.226	9.109	9.202	8
4	1.09	4.500	4.026	.237	10.790	10.889	8
4 $\frac{1}{2}$	1.27	5.	4.506	.247	12.538	12.642	8
5	1.48	5.563	5.047	.258	14.617	14.810	8
6	1.92	6.625	6.065	.280	18.974	19.185	8
7	2.38	7.625	7.023	.301	23.544	23.769	8
8	2.88	8.625	7.981	.322	28.554	28.809	8
9	3.45	9.625	8.941	.342	33.907	34.188	8
10	4.12	10.750	10.020	.365	40.483	41.132	8
11	4.63	11.750	11.	.375	45.557	46.247	8
12	5.07	12.750	12.	.375	49.562	50.706	8

The permissible variation in weight is 5 per cent above and 5 per cent below.

Furnished with threads and couplings and in random lengths, unless otherwise ordered.

For cut lengths, an extra charge will be made above random lengths.

For pipe smoothed on the inside, known as reamed and drifted, an extra charge will be made above standard pipe.

For galvanized or coated pipe, an extra charge will be made above black.

**STEAM, GAS AND WATER PIPE****BLACK AND GALVANIZED**

ADOPTED JANUARY 1, 1919

ALL WEIGHTS AND DIMENSIONS ARE NOMINAL

**EXTRA STRONG**

Size Inches	DIAMETER INCHES		Thickness Inches	Weight per Foot Plain Ends Pounds	Price per Foot
	External	Internal			
1/8	.405	.215	.095	.314	.12
1/4	.540	.302	.119	.535	.07 1/2
3/8	.675	.423	.126	.738	.07 1/2
1/2	.840	.546	.147	1.087	.11
3/4	1.050	.742	.154	1.473	.15
1	1.315	.957	.179	2.171	.22
1 1/4	1.660	1.278	.191	2.996	.30
1 1/2	1.900	1.500	.200	3.631	.36 1/2
2	2.375	1.939	.218	5.022	.50 1/2
2 1/2	2.875	2.323	.276	7.661	.77
3	3.500	2.900	.300	10.252	1.03
3 1/2	4.	3.364	.318	12.505	1.25
4	4.500	3.826	.337	14.983	1.50
4 1/2	5.	4.290	.355	17.611	1.80
5	5.563	4.813	.375	20.778	2.08
6	6.625	5.761	.432	28.573	2.86
7	7.625	6.625	.500	38.048	3.81
8	8.625	7.625	.500	43.388	4.34
9	9.625	8.625	.500	48.728	4.90
10	10.750	9.750	.500	54.735	5.48
11	11.750	10.750	.500	60.075	6.10
12	12.750	11.750	.500	65.415	6.55

The permissible variation in weight is 5 per cent above and 5 per cent below.

**DOUBLE EXTRA STRONG**

Size Inches	DIAMETER, INCHES		Thickness Inches	Weight per Foot Plain Ends Pounds	Price per Foot
	External	Internal			
1/2	.840	.252	.294	1.714	.32
3/4	1.050	.434	.308	2.440	.35
1	1.315	.599	.358	3.659	.37
1 1/4	1.660	.896	.382	5.214	.52 1/2
1 1/2	1.900	1.100	.400	6.408	.65
2	2.375	1.503	.436	9.029	.91
2 1/2	2.875	1.771	.552	13.695	1.37
3	3.500	2.300	.600	18.583	1.86
3 1/2	4.	2.728	.636	22.850	2.30
4	4.500	3.152	.674	27.541	2.76
4 1/2	5.	3.580	.710	32.530	3.26
5	5.563	4.063	.750	38.552	3.86
6	6.625	4.897	.864	53.160	5.32
7	7.625	5.875	.875	63.079	6.35
8	8.625	6.875	.875	72.424	7.25

The permissible variation in weight is 10 per cent above and 10 per cent below.

The following notes apply to both tables:

Furnished with plain ends and in random lengths, unless otherwise ordered.

Random length of extra strong and double extra strong pipe is considered to be 12 feet to 22 feet, we to have the privilege, however, of supplying not exceeding 5 per cent of total order in lengths from 6 to 12 feet.

For pipe fitted with threads and couplings; for cut lengths, or galvanized or coated pipe, an extra charge will be made.

Trade Mark Registered



U.S. Patent Office 1912





